ARMY EXPLOSIVE ORDNANCE DISPOSAL OPERATIONS
IN SUPPORT OF ARMY SPECIAL OPERATIONS FORCES:
WHAT CHANGES ARE REQUIRED?

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the US Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

ARMY EXPLOSIVE ORDNANCE DISPOSAL OPERATIONS IN SUPPORT OF ARMY SPECIAL OPERATIONS FORCES: WHAT CHANGES ARE REQUIRED? by MAJ Michael D. Evans, 110 pages

Army Special Operations (ARSOF) are a significant contributing force in the Global War on Terrorism and have no explosive ordnance disposal (EOD) support other than on an ad hoc basis. The EOD support provided ARSOF, while competent and trained for conventional operations, has not undergone any unique preparation for operations in support of ARSOF.

There has been no formal effort to engage both ARSOF and EOD in order to optimize integration. This study assesses what can be done to insure that ARSOF is provided focused and trained EOD in support of missions in a unique operational environment.

Conventional forces have ready access to EOD support though relationships established in the continental United States, the Combat Training Centers, and past contingency operations. The Army's Cold War focus, resulted in EOD being organized and equipped primarily to support conventional forces.

The operational environment has changed. The US can no longer expect to fight predominately high intensity mechanized battles on linear, contiguous battlefields. Future opponents will employ asymmetric methods in order to avoid our strengths. ARSOF is central to combating these threats.

Proliferation of CBRN technology and the continued use of improvised explosive devices in attacks globally demands a rigorous research effort.

ACKNOWLEDGMENTS

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ACRONYMS

AAR	After Action Review
AOB	Advanced Operating Bases
ARSOF	Army Special Operations Forces
CASCOM	Combined Arms Support Command
CBRN	Chemical, Biological, Radiological, and Nuclear
CEA	Captured Enemy Ammunition
CGSC	Command and General Staff College
CJSOTF	Combined Joint Special Operations Task Force
COE	Contemporary Operational Environment
CP	Counter-Proliferation
CS	Combat Support
CSS	Combat Service and Support
DA	Direct Action
DAIRS	Deployable Automated Incident Reporting System
DOD	Department of Defense
DTA	Directed Training Affiliation
EOD	Explosive Ordnance Disposal
FOB	Forward Operating Base
FORSCOM	Forces Command
HDO	Humanitarian De-mining Operations
IED	Improvised Explosive Device
MMAS	Master of Military Art and Science
NCO	Noncommissioned Officers

ODA	Operational Detachment Alpha
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OPTEMPO	Operational Tempo
SOF	Special Operations Forces
TTP	Tactics, Techniques, and Procedures
USASOC	United States Army Special Operations Command
USSF	US Special Forces
USSOCOM	US Special Operations Command
UW	Unconventional Warfare
UXO	Unexploded Ordnance
WMD	Weapons of Mass Destruction

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CHAPTER 1

INTRODUCTION

> The 11 September 2001, attacks clearly demonstrate that determined terrorists will go to any lengths to inflict catastrophic losses on Americans, whether civilian or military personnel."
> Of greater importance is the fact that these terrorists have chemical, biological, nuclear and high yield explosive weapons and the desire to kill as many Americans as possible and undermine our nation's interests and influence around the world. Special operations command's vital role is bringing terrorists to justice or by taking justice directly to them.
>
> General Brown, Commander US Special Operations
> Command, Testimony to Senate Sub-Committee

Research Questions and Research Relevancy
to the Current Operational Environment

The subject of this research paper is Army Explosive Ordnance Disposal (EOD)

and how to improve integration between EOD and Army Special Operations Forces

(ARSOF). There are several reasons why this topic must be addressed. There is no

predeployment relationship between EOD and Army Special Operations Forces

(ARSOF). Under the current arrangement EOD units and ARSOF conduct no

predeployment planning, integration, or familiarization. Most often EOD and ARSOF

units are introduced on the battlefield when the supporting EOD element arrives at a

forward location. This independent planning and deployment limits the ability of EOD

units to adequately understand ARSOF missions, capabilities, and the unique operational

environment within which ARSOF works. Equally important is the impact it has on

ARSOF leaders' ability to maximize EOD's value added in support of their operations.

Recognizing that EOD is supporting ARSOF in Afghanistan and to a lesser degree in

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Iraq, there should be some degree of interaction and familiarity prior to meeting on the battlefield.

Army EOD companies and teams have been working with ARSOF in Afghanistan on numerous missions. Some examples of the types of tasks that EOD has completed in support of ARSOF are clearance of booby traps, destruction of captured enemy ammunition (CEA), post blast analysis of bombings, destruction or mitigation of unexploded ordnance (UXO), and improvised explosive device (IED), response and mitigation. EOD companies and teams have also collected and interpreted technical intelligence, provided ordnance and UXO training, technical assistance in weapons buy back programs, and force protection on combat operations. The majority of these operations were in support of Special Forces Operational Detachment Alphas (ODA) with a much smaller number of teams supporting specific Ranger operations. The EOD companies allocated teams (two to three soldiers) to forward locations such as forward operating bases (FOBs), advanced operating bases (AOBs), firebases, and safe houses. While at these locations, the teams were often free to prioritize their work in support of the various organizations that were present (ARSOF, other government agencies, and later conventional infantry units). EOD teams often found themselves executing EOD operations in support of ARSOF under tactical conditions. For example, over the course of its deployment, an EOD company had all but one of its teams involved in small-arms engagements, with all receiving rocket fire at some time (Melillo 2003a; 2003b).

The primary research question is: What is the best means of integrating EOD and ARSOF? In order to answer the primary question two secondary questions must be answered as well. The first is what changes, if any, are required for ARSOF to better

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integrate EOD elements? The second is, can the existing relationship be improved

through changes in EOD doctrine, command and control, organization, or material?

This thesis is the first study that has attempted to engage the Army Special

Operations and the Army EOD communities in an objective analysis of what actions or

changes are required to best integrate these two critical components of the US

government's counterterrorism campaign.

It is the primary task of EOD soldiers to reduce or defeat the threat of UXO and

IED. There is no EOD or equivalent capability within ARSOF. The Special Forces

engineers (Career Management Field 18C) and select Rangers (infantrymen) are trained

to conduct demolitions operations and breaching. Special Forces engineers are authorized

to conduct disposal of UXO under specific circumstances (USASOC Regulation 385-1).

They seldom receive training on UXO identification or destruction tasks, and when they

do, it is often rudimentary, inconsistent, and lacks current technical data (Cartwright

2003; Melillo 2003a). Ranger forces do not receive UXO or EOD related training above

that of a conventional soldier. There are no ARSOF forces trained, tasked, or authorized

to conduct render safe procedures on UXO or IEDs.

Several factors further complicate the development of EOD like skills by 18Cs.

The basic EOD course, which produces entry-level EOD soldiers, sailors, airmen, and

marines, is six to eight months in length. Extensive time commitments are required in

order to maintain even the basic skills. EOD soldiers require several years of training,

development, and experience before they are prepared to assume a team-leader role. The

units undergo refresher training and annual evaluations as part of the Army Training

Evaluation Program or external evaluations done in conjunction with operational

deployments. The EOD field is highly technical in nature requiring specific tools, equipment, publications, and explosives. The complexity of the career field is increased by the ability of threat forces to employ sophisticated IEDs and vehicle borne IEDs. The quantities of US and foreign ordnance are constantly increasing with 18,000 pieces of ordnance currently catalogued (Reinhard 2004). All of this solidifies the necessity for soldiers specifically trained and equipped to conduct EOD operations. As a result, ARSOF has been requesting and utilizing EOD elements on a case by case basis in support of their operations.

ARSOF leaders, like other maneuver commanders, are often forced to make the decision to conduct UXO and IED operations as a result of exigent battlefield conditions.

> 99 out of 100 times my guys [Rangers] are going to be fine doing UXO destruction and then that one time there is going to be a booby trap, which is what we ran into on a mission. There were grenades and mines on the bottom with the pins pulled and simple stuff on top. Could we have done it? Yeah probably, but we probably could have ended up blowing that cache and spreading that stuff God knows how far, possibly on ourselves. An EOD guy had to sit there and figure out that mess. It was a good thing that we had EOD there because as much as I hate to say it I do not think that my guys could have done that. (Masarcchia 2004)

When a commander is forced to use an untrained soldier for a hazardous task, he assumes risk to his force and mission. Reducing the instances that this takes place is one of the objectives of this research.

The Secretary of Defense has directed the United States Special Operations Command (USSOCOM) to take the lead within the Department of Defense for planning and leading counterterrorism operations. In response to that directive, USSOCOM developed new joint and interagency organizations focused on worldwide counterterrorism planning and operations. USSOCOM, using collaborative planning tools, is directly linked with the Office of the Secretary of Defense, Joint Staff, Central

Intelligence Agency, Departments of State, Justice, and Energy as well as the geographic combatant commanders. USSOCOM now has the capability to plan and execute operations with other regional combatant commands in supporting roles. Historically, USSOCOM acted in a force provider role, supplying trained and ready special operations forces (SOF) units in support of the regional combatant commander's objectives. Additionally, a 5,100 manpower and a 35 percent increase in funding programmed for USSOCOM's 2004 budget reflect the expanded role of SOF in the prosecution of what has become known as the Global War on Terrorism (Department of State 2003).

<u>Limitations and Constraints</u>

The scope of this study will be limited due to time available, classification constraints, and resource availability. Although ARSOF is comprised of US Special Forces, Ranger Forces, Special Operations Aviation, Psychological Operations, Civil Affairs units, Signal and Combat Service and Support (CSS) units, this study will address only Special Forces and Ranger Forces. Special Forces and Ranger units form the ground combat element of ARSOF and as a result are the ARSOF elements most likely to require EOD support.

Additionally, the study does not directly address the technical skills of the EOD soldiers. It is assumed that unless otherwise noted, the technical skills provided in the area of UXO and IED recognition, field evaluation, identification, mitigation, render safe, disposal, and collection of technical intelligence are adequate. The study will, however, address areas that were identified as needing improvement or skill sets that may need to be added or adjusted in order to more effectively integrate and support ARSOF operations.

While researching this subject material, two additional subjects were discovered that should be considered for later research. They will not be explored in depth for this research, although they may have an indirect link. There appears to be either gaps in information or consternation from the EOD or ARSOF fields regarding these subjects.

No written material regarding EOD support to Civil Affairs and the role of UXO remediation in nation building programs was discovered. The removal of UXO from a local village's fields and roads gain the confidence of indigenous peoples by reducing the threat to village, children, and livestock. These types of operations develop confidence in US and coalition forces, as well as offer potential sources of intelligence. Additionally, psychological operations units may be able to use these programs as a theme in strategic or theater information operations campaigns.

Several EOD and ARSOF representatives questioned why the EOD community is not organized under USSOCOM. The queries were mostly from ARSOF leaders attempting to understand how EOD was structured. The basis of this issue involves questions about why EOD is not structured under United States Army Special Operations Command (USASOC), providing EOD companies and teams to conventional forces as well as special operations in the same manner as the US Army Civil Affairs Psychological Operations Command (Airborne). While this is a worthwhile question, it is far too complex for the scope of this thesis.

This thesis will not address humanitarian de-mining operations (HDO), a mission set in which EOD and ARSOF have worked together in the past. US Special Forces (USSF), supported by EOD soldiers, undertake HDO missions in which foreign soldiers received de-mining training. The training was focused on developing a capability for the

host nation to manage the threat of mines and UXO internally. HDO will not be addressed for two reasons. The primary reason is the legal framework of traditional HDO missions precludes EOD and ARSOF from actually removing mines for foreign governments unless the munitions are a direct threat to US forces. This thesis is focused on contingency operations involving EOD support to ARSOF. As such, HDO is an inappropriate subject for discussion. The second reason is the dramatic increase in operational deployments for both ARSOF and EOD following the attacks of 11 September 2001. This increase in operational tempo (OPTEMPO) has caused the ARSOF community to reconsider the level of its involvement with HDO. It is unclear at this time if ARSOF and EOD will continue to support these training missions.

Existing Structure and Missions of Explosive Ordnance Disposal

Army EOD forces have historically been organized, equipped, and trained to support conventional combat, combat support (CS), and CSS forces in the conduct of conventional operations. This configuration developed as a result of accepted assumptions regarding the Cold War and the anticipated environment in which the US expected to fight next. While these forces were well prepared and trained for high-intensity conventional operations in central Europe, the Korean Peninsula, and the deserts of Southwest Asia, this represents only one portion of the spectrum of operations US forces are expected to operate. In fact, a growing body of evidence and recent world events, such as the ongoing operations in Afghanistan, Iraq, the Balkans, Philippines, and Columbia suggest that for the foreseeable future, high intensity combat operations between heavy conventional forces will be less frequent than stability and support operations or small scale contingencies.

The primary missions of Army EOD forces are the protection of personnel, facilities, and critical infrastructure from the hazards posed by UXO and IED during combat operations and in peacetime. EOD elements also enable maneuver of combat formations by reducing UXO and IED threats from key lines of communication or supply routes.

The term UXO also refers to US and foreign chemical, biological, radiological, and nuclear (CBRN) ordnance. EOD elements are the only forces specifically trained, equipped, and tasked to remove or mitigate the hazards posed by UXO and IED. The most important skill available to EOD in their effort to reduce the threat of UXO and IED is the employment of a render safe procedure. EOD soldiers are the only force trained or authorized to conduct render safe procedure of UXO and IED.

In January 2004, two of the four Army EOD battalions and the only active component Ordnance Group Headquarters were deployed in support of Operation Iraqi Freedom (OIF). One of the two Army National Guard EOD battalions was deployed to Afghanistan in support of Operation Enduring Freedom (OEF). This equates to one-half of the available EOD battalions being decisively engaged in combat operations. The two remaining EOD battalions were responsible for the continental Unites States and were exercising command of up to twenty EOD companies fully engaged with routine operations as well as increased security requirements. EOD is supporting conventional, special operations, other government agencies, and civil authorities across the full spectrum of military operations on a daily basis.

Complicating elements of EOD missions are the types and quantities of missions conducted in support of civil authorities. Some of these include presidential protection

details in support of the US Secret Service and Department of State, commonly referred to as very important person's mission. Additionally, Army EOD provides a public safety mission supporting federal, state, and local officials that do not have access to civilian bomb squads or hazardous device technicians. Other operations that EOD may support include security and advisory assistance, antiterrorism training, arms control, and treaty verification. Requests for many of these skills increased dramatically as a result of the 11 September 2001 attacks in New York and Washington, DC (Department of the Army 1996; 2003).

In targeting US forces, the weapon of choice for transnational and domestic terrorists is likely to remain large conventional, high explosive IEDs. The assumption is that threat forces will continue with these proven methods as long as they are successful. The sophistication of these attacks is increasing. Additionally, the threat posed to operational forces across the battlefield by sophisticated IED and CBRN weapons is growing as well. Transnational terrorists groups such as those associated with Osama bin Laden's Al Qaida network, have demonstrated an interest in acquiring and using CBRN material and weapons (Senate Select Committee on Intelligence 2000; Shelton n.d.). CBRN related technology is increasingly available via the worldwide web and smuggling of CBRN material continues. The worldwide web also is a ready source of information on potential sources of hardware supply for use in legitimate as well as elicit weapons production (Stern 1999).

The Japanese religious cult, Aum Shinrikiyo, produced biological and chemical weapons and conducted several terrorist chemical and biological attacks. The Aum cult members used a shadowy network of Russian mafia, North Korean military, and indirect

links with Iran to infiltrate various national governments, recruit scientists with CBRN expertise, and acquire the required dual use equipment and precursor chemicals.

Aum members conducted nine attacks with biological agents mostly with poor results. The group's efforts to produce a chemical weapon were more successful, and they killed 7 and sickened 200. While the agents were toxic, their scientists struggled with mastering the technology required to effectively disseminate it. On 20 March 1995, Aum cult members conducted a widely publicized terrorist chemical attack on the Tokyo subway system. The attack used sarin nerve agent, killing 12 and injuring more than 5,000 others. In the months following the 20 March attack, law enforcement officials thwarted two other chemical weapon attacks. At the time of the group leader's arrest, Aum Shinrikiyo had amassed enough chemicals to produce tons of chemical agents, $1.4 billion in assets and 50,000 members worldwide (Stern 1999, 60-65).

The exposure of an international nuclear weapons technology and material smuggling ring in early 2004 is another example of this threat. Doctor A. Q. Khan, father of Pakistan's nuclear weapons program and founder of their national laboratory, under international pressure admitted that he sold nuclear weapons technology to Libya and Iran. Members of his staff also had contact with the Taliban, the Islamic extremist group that formerly ruled Afghanistan and sheltered Osama bin Laden. These revelations and Khan's subsequent pardon by Pakistan's president, Pervez Musharaff is precisely the scenario that many in the intelligence and counter-proliferation (CP) communities are concerned about.

A clear understanding of Army EOD and ARSOF units, missions, and organizational structure will provide context for the research presented. These brief

descriptions of the two communities will assist in understanding the strengths and weaknesses as well as the environments within which each normally works.

The preponderance of Army EOD forces are assigned to the 52d Ordnance Group (EOD) located at Fort Gillem, Georgia. It is a brigade command organized under the Deputy Chief of Staff for Operations, Forces Command. The command is comprised of four battalion headquarters and thirty-nine deployable EOD companies. Not included in the 52d Ordnance Group (EOD) are five EOD companies. There are two companies assigned to US Army Europe, two companies assigned to the US Army Pacific, and one organized under US Eight Army in Korea. There are less than 1,200 EOD officers and enlisted soldiers in the US Army (Clifford 2000).

An EOD battalion is responsible for providing command and control of three to seven deployed EOD companies. An EOD battalion supports each corps and theater support command. The battalion staff integrates with its operational counterparts, coordinates with units for provision of EOD support, develops plans, assists with implementation of UXO reporting systems, and monitors current operations. It is a relatively lean organization with only twenty-five personnel authorized and a limited capability to support itself logistically.

The primary operational unit employed by EOD is the company. Commanded by a captain, the company is comprised of twenty-one soldiers, with eighteen being EOD qualified personnel. An EOD company employs light or heavy response teams in the execution of its missions (see figure 1). Light teams, comprised of a staff sergeant team leader and one other soldier are capable of addressing most conventional US and foreign ordnance and IEDs. The heavy teams are led by one of the two assigned sergeants first

class and have two other EOD soldiers assigned. Prior to recent experiences in Afghanistan and Iraq, EOD doctrine called for heavy teams to be employed against large or complex scenarios, such as one involving multiple light teams, chemical munitions that exceed the capability of a light team, or operations involving nuclear weapons or material. During recent operations in Afghanistan, EOD teams were task organized based primarily on specific mission analysis (Reinhard 2004; Tate 2004a; Weber 2004). An EOD company at full strength has five light teams and two heavy teams (Department of the Army 1996, 10).

The commanders of EOD units from the group, battalion, and company are responsible for acting as an EOD special staff officer to a theater commander, joint task force commander, or a maneuver commander at the operational or tactical level. The senior deployed EOD officer and his staff will act as the theater EOD officer, conduct theater level EOD planning, and advise the operational commander on allocation and employment of EOD forces (Department of the Army 1996, 8).

The EOD units assigned to US Army Pacific Command, US Army Europe, and US Eighth Army in Korea are theater assets and have no peacetime command relationship with the 52d Ordnance Group (EOD). During a major regional conflict in which the 52d Ordnance Group deploys, it assumes command of EOD forces in the theater.
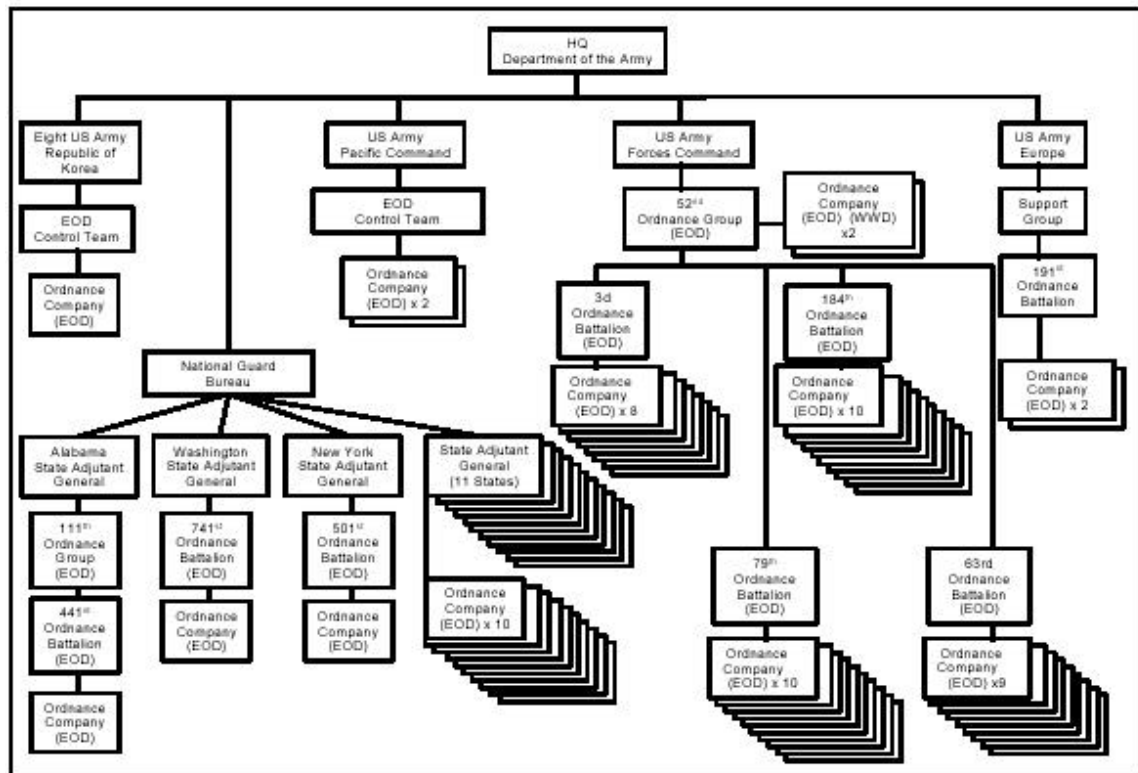
Figure 1.   EOD Peacetime Force Structure

Source: Department of the Army, 2004, 5.

Existing of Army Special Operations Forces

As related previously, this study will focus on USSF and Ranger forces. These two units share many qualities and skills. However, their primary missions are fundamentally different (see figure 2).
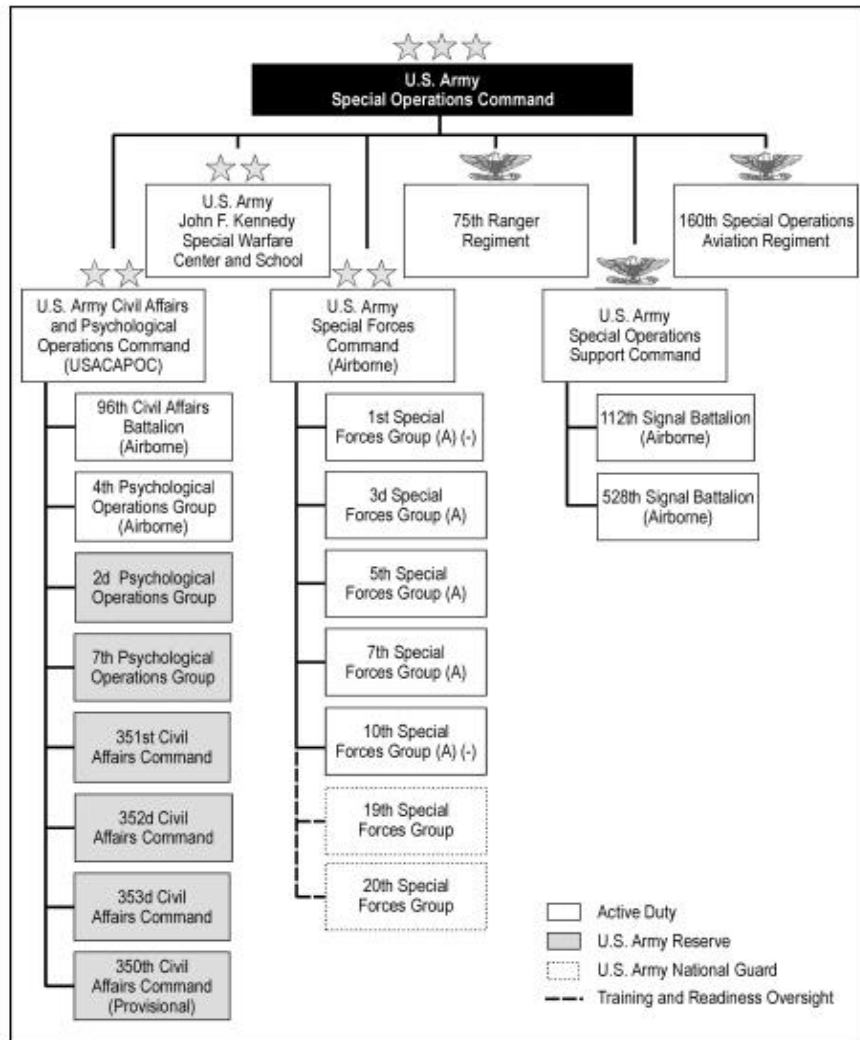
Figure 2. Army Special Operations Organizational Structure

Source: Department of the Army, 1999a, 3-2.

The USSF and Ranger units are both capable of inserting into an area of
operations by parachute, over land, or through use of naval vessels or small boats. The
two commands are made up of volunteers who are highly trained and specially screened.
All Special Forces and Ranger personnel are airborne trained qualified and are required
to maintain exceptionally high standards of conduct.

All of the Army's Ranger forces are organized under the 75th Ranger Regiment, which falls under the USASOC. The 75th Ranger Regiment provides the National Command Authority or Chairman of the Joint Chiefs of Staff a highly trained, forced entry, and Direct Action (DA) capable force in support of strategic or theater objectives. Ranger units often employ specialized means of insertion and are well trained in the precision application of combat power. The 75th Ranger Regiment makes up USSOCOM's largest DA force.

The Ranger Regimental structure is based on a traditional light infantry brigade and shares many similarities. The Ranger Regimental headquarters maintains a Regimental Reconnaissance Detachment, Signal and Communication Detachment, Tactical Air Control Party, a Weather Team and a US Marine Corps liaison element. The regimental headquarters exercises command and control of three identical Ranger battalions.

While the Ranger Regiment regularly conducts platoon through regimental-sized maneuver training and operations, the battalion remains the primary maneuver element. The battalion exercises command of a Headquarters Company and three Ranger companies. The battalion also maintains sniper and mortar platoons and a tactical air control party. Ranger companies are made up of three rifle platoons and an anti-tank section (Department of the Army 1999).

Ranger forces are flexible, highly trained in light infantry and special operations. Some examples of Ranger missions may include airfield seizure in a forced entry role in order to establish a lodgment for follow-on forces, raids to destroy critical enemy facilities and other DA operations. Ranger units are traditionally assigned high-risk

missions that cannot be accomplished by other forces. The Ranger Regiment rotates one Ranger battalion as the Ranger Ready Force. The Ranger Ready Force battalion is prepared to deploy within eighteen hours of notification, with an initial ready company prepared to deploy with nine hours notice (Department of the Army 1987).

Ranger forces may be employed as part of a larger Joint Special Operations Task Force, Army Special Operations Task Force, or as an independent force under a conventional Army organization or Joint Task Force (Department of the Army 1987, 1999a).

USSF are structured into five active component and two Army National Guard Special Forces Groups. Each Special Forces Group has a geographical focus. The operational elements are language trained and have extensive training on the customs and culture of their respective areas of responsibility. The five active component Special Forces Groups are the 1st, 3rd, 5th, 7th, and 10th. The Army National Guard Special Forces Groups are the 19th and 20th. Each Special Forces Group is comprised of three battalions. During combat operations, a Special Forces Group may serve as a larger Joint Special Operations Task Force, a Combined Joint Special Operations Task Force (CJSOTF), or as an Army Special Operations Task Force (Department of the Army 2001, 4-9 – 4-11).

Each battalion has three companies with six ODAs. The ODA is the primary operational element of USSF. An ODA is commanded by a Special Forces captain and has eleven other soldiers. Each soldier is a subject matter expert within his field. The disciplines present in an ODA are operations, intelligence, communications, weapons, engineer, and medical. The team members are cross-trained within disciplines, speak the

regional language, and trained to conduct extended operations behind enemy lines. The ODA is capable of operating as a split team when required (Department of the Army 2001, 3-32).

In order to adequately discuss how to best integrate and support ARSOF, their doctrinal missions must be understood. The core tasks of Special Forces are unconventional warfare (UW), foreign internal defense (FID), special reconnaissance (SR), direct action (DA), and counterterrorism (Department of the Army 1999a; Headquarters, US Special Operations Command. 2003). Only foreign internal defense, UW, DA, and counterterrorism will be discussed due to the low probability of EOD support to special reconnaissance missions.

Special Forces ODAs spend the majority of their efforts conducting foreign internal defense, assisting the legitimate government of a host nation, improve stability through countering lawlessness, or internal insurgency. These efforts also aid in regional engagement with the host nation through joint exercises, training assistance programs, and humanitarian operations (Department of the Army 1999a, 3-1). These programs are normally undertaken in support of the geographic combatant commander's theater objectives and under the Theater Special Operations Command. Through participation in the Joint Combined Exchange Training program, Special Forces train with members of the various nations in their area of emphasis. This training hones their language skills and cultural awareness. A secondary, but very significant side effect, are the ties developed with civilian and military leaders in the host nation. As a result of these programs, ARSOF is often the only force available to the combatant commander when the

deployment of conventional forces would not be welcomed by the host nation or would be politically untenable.

The UW mission encompasses a wide range of combat operations (military and paramilitary) all conducted in enemy held territory or other denied areas. These may include training and working with local guerillas or militia, sabotage of enemy facilities, intelligence collection, or extended guerrilla warfare. In most instances UW operations incorporate indigenous or surrogate forces. Synchronized UW operations support the joint force commander by extending his battle space beyond enemy lines (Department of the Army 1999a). Under the UW rubric, other doctrinal tasks are executed as well.

The DA mission is an offensive combat operation most closely resembling a raid, intended to accomplish specific objectives with a limited amount of time in the target area. Special Forces ODAs may conduct DA missions in support of UW objectives or as independent operations supporting strategic or regional combatant commander's operational objectives. Typical DA missions take place at distances beyond that of conventional forces and often with effects disproportionate to the size of the element responsible. Examples of DA operations include destruction of critical enemy facilities, seizure of sensitive materials, terminal guidance of aerially delivered precision fires, sabotage, or the capture or killing of enemy combatants in denied or sensitive areas (Department of the Army 2001).

The core task of counterterrorism was added (replacing the task of combating terrorism) in an effort to more accurately describe the distinctive offensive role that SOF plays in support of the Department of Defense (DOD) combating terrorism program. Counterterrorism is a core task for all ARSOF as well as for USSF. Counterterrorism

operations are fundamentally offensive in nature and are undertaken in an effort to prevent, deter, or respond to terrorism. These may include hostage rescue, recovery of sensitive materials, or attacks directed at terrorist infrastructure (Headquarters, US Special Operations Command. 2003). Previously, these types of operations were withheld for specific Special Forces Operational Detachments or Special Mission Units. This change in task and mission structure highlights added emphasis within the US Special Operations Command (USSOCOM) on counterterrorism.

The question of how to best integrate and provide EOD support to ARSOF is best answered using observations and lessons learned from OEF. Several pieces of literature and research subjects suggest the future operational environments will be more similar to the Afghanistan theater than not. It must be noted that the initial data from OIF indicates limited ARSOF requests for EOD support. Special Mission Units retain their organic EOD capabilities however; there have been very few requests for EOD forces to support USSF ODAs (Everhard 2003).

<center>The Textbook Unconventional War: ARSOF in Afghanistan</center>

In response to the 11 September 2001 attacks, the US Government and coalition partners committed to take offensive military action to remove the Islamic fundamentalist Taliban government of the central Asian country of Afghanistan. The Taliban had refused to eject Osama bin Laden and his al Qaida fighters. In the early days of OEF, ARSOF and members of the US Air Force, Special Tactics Squadrons, were inserted into Afghanistan linking up with representatives of the opposition group, the Northern Alliance in order to initiate UW operations. The Northern Alliance made up of widely dispersed and unorganized militias. Until the arrival of US forces the Northern Alliance

had been contained in the northern portion of the country, in a predominately defensive fight. As a result of the ensuing UW campaign and the support of coalition airpower, the Northern Alliance forces were able to transition into offensive operations and the Taliban was defeated, forty-nine days later. A more moderate provisional Afghani government was established.

Since that time, the US has been engaged in a campaign to decisively defeat the remaining Taliban and Al Qaida fighters operating from remote, mountainous regions of the country. Afghanistan has made mixed progress with nation building advancing in some areas while others are subject to banditry and terrorist attacks.

An indicator of the environment's complexity is the spectrum of current ARSOF missions in Afghanistan. USSF and their supporting EOD elements are conducting foreign internal defense in some provinces training the Afghan National Army. In other provinces, they remain focused on UW.

Army EOD companies deployed in support of US theater objectives were initially working solely with ARSOF and other government agencies. Later, a Joint Task Force was established to exercise command of all operations in the Afghan theater. This corps level headquarters, Combined Joint Task Force-180, commanded the CJSOTF, a light infantry division and supporting CSS units. Later, an EOD battalion was organized under the command of the division headquarters, but with a theater wide mission.

Operations were complicated by the fact that Afghanistan is one of the most heavily mined nations in the world. Like much of the developing world, it has experienced nearly continuous unrest and civil wars. The extent of the UXO contamination and quantities of enemy ordnance present in the country was and is on a

scale previously not seen before. It is estimated that there are seven to ten million mines contaminating eleven percent of the countryside (Department of the Army 2003; Celeski 2003).

Some key terms must be defined in order for this research effort to be most effective.

EOD operations are particular courses or modes of action taken by EOD personnel for access to diagnosis, rendering safe, recovery, and final disposal of explosive ordnance or any hazardous material associated with an EOD incident (Department of the Army 2004, 136). Examples of the types of tasks that EOD soldiers perform are ordnance identification, field evaluation of safety or condition, render safe procedure on IED, UXO or booby traps, disposal of UXO, collection and production of technical intelligence reports, construction of protective works in order to limit damage to critical facilities, and very important person protective details (Department of the Army 1996; Training and Doctrine Command. 2003).

Render safe procedures are that portion of the EOD procedures involving the application of special EODl methods and tools to provide for the interruption of functions or separation of essential components of unexploded explosive ordnance to prevent an unacceptable detonation (Department of the Army 2004, glossary 10).

Special Operations are those operations conducted by specially organized, trained, and equipped military and paramilitary forces to achieve military, political, economic, or informational objectives by unconventional military means in hostile, denied, or politically sensitive areas. These operations are conducted across the full range of military operations; independently or in coordination with operations of conventional,

non SOF. Political and military considerations frequently shape special operations requiring clandestine, covert, or low-visibility techniques and oversight at the national level. Special operations differ from conventional operations in degree of physical and political risk, operational techniques, mode of employment, independence from friendly support and dependence on detailed operational intelligence and indigenous assets (Chairman of the Joint Chiefs of Staff 1994, 43).

The contemporary operational environment (COE) refers to the geopolitical and threat environment that followed the dissolution of the Soviet Union and the changes that occurred when the constraining influences of the US and the Soviet Union were removed. The COE threat includes States of Concern (such as Iran, Libya, Syria, North Korea, and Sudan), surrogates of nation states, traditional state sponsored terrorist groups, non-state sponsored terrorists groups, political and religious extremists, and previously unknown independent actors. The nature of operations that US forces will be expected to operate in encompasses the full spectrum of military operations from low visibility counterterrorism or CP operations in sensitive or denied areas through stability and support operations, small scale contingencies to high-intensity conventional operations in a major regional conflict. A widely accepted element of the COE is the continued use of asymmetric warfare and methods to counter western conventional military dominance (US Army 2000).

Asymmetric warfare is the act of employing limited means, often widely available low-end technology, to target the vulnerabilities of a militarily superior opponent. The development of precision weapons, information based command and control, as well as other technological leaps has allowed the US to develop military formations that

incorporate superior lethality, protection, agility, and situational awareness than that of its opponents. This military overmatch has forced threat forces to avoid direct confrontation whenever possible. The use of an IED incorporating UXO as an explosive charge to destroy a $7.2 million M1A2 Abrams main battle tank is an example of an asymmetric attack. Asymmetric methods also refer to the use of innovative means of targeting enemy forces that may have not been used previously. Some examples are the use of hijacked airliners as weapons during the 11 September 2001 attacks against the World Trade Center in New York and the Pentagon in Washington, DC, and the use of letters laced with anthrax to disperse biological warfare agent throughout a postal system. Many US government officials believe that CBRN weapons are the number one asymmetric threat facing the United States today (The White House 2003; Stern 1999: Senate Select Committee on Intelligence 2000).

A CBRN weapon incorporates one of several poisonous chemical agents, harmful microorganisms or radioactive isotopes, and a dissemination mechanism in order to cause casualties or spread contamination. Some of these agents are nerve or blister agents (chemical agents) or Smallpox, Plague, or Anthrax (biological agents). The radiological dispersal device is primarily a psychological or economical weapon. It denies access to wide areas or urban complexes as it spreads radioactive contamination. Although it may be a somewhat militarily insignificant weapon, its impact on the national psyche cannot be underestimated. The inclusion of both a radiological and nuclear category highlights the difference between a weapon intended to spread contamination and a true nuclear weapon, which produces a nuclear yield (Stern 1999).

CHAPTER 2

LITERATURE REVIEW

The *National Strategy to Combat Weapons of Mass Destruction (NSCWMD)* relates the US government's encompassing plan to address the growing threat of weapons of mass destruction (WMD). For the purposes of this thesis, the phrase CBRN will be used as it is more precise and limits the emotional response to the term WMD. The *NSCWMD* provides a broad, executive-level view of the CBRN threat posed to the US and the security challenges of countering that threat. The strategy is based on three pillars: strengthened nonproliferation to combat WMD use, consequence management to respond to WMD use and most relevant to this research counter-proliferation (CP) to combat WMD use.

The first two pillars are concerned with the traditional roles of nonproliferation, treaty verification and enforcement, technology controls and diplomacy in limiting the spread of CBRN related knowledge, and the improvement of plans and programs designed to respond to and mitigate the effects of an attack. The *NSCWMD* confirms the importance of continued US support of existing international protocols, treaties, and multilateral agreements such as the Nuclear Nonproliferation Treaty, the Biological Weapons Convention, and the Chemical Weapons Convention. These agreements, coupled with strict control of sensitive weapons technologies, focus on raising the international and fiscal cost of developing CBRN programs.

The third pillar, CP to combat CBRN weapon use, is the most relevant to this study and includes three elements: Interdiction, Deterrence and Defense, and Mitigation.

The *NSCWMD* relates that CP assumes international treaties, technology controls, and diplomacy will not always be effective. The strategy requires that the US must maintain a full spectrum of options oriented on denying terrorist groups or hostile states from gaining access to CBRN weapons. Interdiction is the interruption of the procurement, delivery, or production of CBRN weapons, precursor chemicals, or illicit materials intended for use in a prohibited CBRN program. It may be affected through diplomatic measures, international law enforcement action or physical seizure, or destruction through use of force.

The US government's stated policy of overwhelming response to a WMD attack in concert with a full spectrum of military force options equates to deterrence. The credible threat of a military response is a crucial aspect of deterrence of nation states. There are specialized ARSOF units tasked to conduct CP operations, however, the dynamic and fluid nature of the COE battlefield may not allow the time to alert and deploy these highly specialized units. Additionally, USSF and Ranger forces are both tasked to conduct or support CP operations.

The final point requiring discussion is Mitigation and Defense and the concept of Active Defense.

> US military forces and appropriate civilian agencies must have the capability to defend against WMD-armed adversaries, including in appropriate cases through preemptive measures. This requires capabilities to detect and destroy an adversary's WMD assets before these weapons are used. (The White House 2003)

It is important to note that use of an active defense to engage or interdict an opponent's CBRN weapons or production efforts require high fidelity intelligence in support of targeting.

The US Army's *Transformation Roadmap* describes the Army role in the larger modernization process that the US Department of Defense is undergoing. The Transformation process is worthy of discussion in that it, combined with the ongoing Global War on Terrorism, constitutes the nucleus of the US Army's focus. It will define the structure, missions, and capabilities of the Army for the next several decades.

These fundamental changes were prompted by the evolving threat presented in the COE and a desire to more rapidly project full spectrum capable forces to overseas battlefields. Though the process was initiated prior to the attacks of 11 September 2001, the Roadmap is a living document and the authors use this attack as validation of their threat assessment. It provides the planned changes to organizational structure, and in more detail, a series of descriptions of the intended capabilities and roles for the US Army.

Of particular consequence to this study is the *Transformation Roadmap's* Annex B, "Projecting and Sustaining US Forces in Distant Anti-Access or Area-Denial Environments and Defeating Anti-Access and Area-Denial." The annex describes the Army's forced entry operations role in Assured Access. The annex provides details on the requirement of future forces to deploy from home stations to a forward theater that is protected by area denial and anti access measures and conduct decisive combat operations immediately upon arrival. Forward deployed forces, SOF regional engagement, and mobility enablers are identified as essential elements of this enhanced capability. The annex describes airborne and Ranger units as the forces designated for evolution to a more robust forced entry capability. Although the *Transformation Roadmap* does not identify details of what may constitute "anti-access or area denial

measures," based on other documents reviewed in support of this research, it is reasonable to assume the threat spans the gamut from low technology IEDs incorporating bulk high explosive to advanced technology munitions and ordnance intended to use contamination to deny US forces access to facilities such as airports, sea ports, or other critical infrastructure.

The Ordnance Corps published its *Ordnance Corps Vision* in order to guide the development of the Arm, Fix, and EOD functional areas in the larger Transformation process. It is appropriate to discuss this document as it charts the planned evolution of EOD in support of Transformation and articulates the Ordnance Corp's interpretation of requirements in the near term of Force XXI (year 2010) through the Army After Next (year 2025).

The document briefly describes the future environment and threat, which the vision intends to counter. These include the concern that the types and complexity of potential conflicts are so expansive that there is no template for traditional scenario development. The Vision does, however, commit that stability and support operations will become more prevalent with missions such as anti-terrorism, CP, and nation assistance increasing. It is concerned with the mounting threat posed by terrorism, the increasing quantity of high technology UXO, IED, and the possible use of CBRN weapons. The authors perceive that these weapons and technologies could be used to affect mobilization and lines of communication during limited regional conflicts as well as major regional conflicts.

The Ordnance Vision document describes expectations for development of an overarching Force Sustainment Command that will include all the logistics organizations

to support the nation's military and civil commitments. It relates that through this command Joint Service EOD forces will be capable of employing parachute and dive qualified EOD personnel to defeat high technology conventional munitions as well as CBRN weapons. It is important to note although numerous Army EOD soldiers are airborne trained, there are currently no Army EOD airborne or dive units. The Ordnance Corps Vision goes on to describe numerous traditional EOD missions as well as the responsibility "to respond to counter terrorism and UXO incidents on the sea, in the air, and on land and weapons of mass destruction (WMD)."

This Literature Review would be remiss if it did not address two doctrinal publications. The first discussed will be Field Manual (FM) 9-15 *Explosive Ordnance Disposal Operations*. FM 9-15 is the primary Army EOD publication that has guided EOD in recent years and constitutes the sum total of Army EOD doctrine. The publication replacing FM 9-15 is FM 4-30.5 and is under review. The doctrinal publication FM 100-25, *Army Special Operations Forces Doctrine*, was used extensively to reference the background on ARSOF for chapter 1 and will not be reviewed as the relevant material has already been presented.

FM 9-15 is organized into broad categories that discuss EOD structure, EOD force allocation in support of the theater and maneuver units, command and control, nuclear, chemical and biological responses, domestic operations, and environmental laws. While many of these subject areas indirectly relate to the research questions, the most important aspect of FM 9-15 is what it does not say. The publication has a single line addressing support to SOF. FM 9-15 relates that EOD assets from the theater general

support company may support SOF if required in a direct support role. (Department of the Army 1996, 9).

The EOD doctrinal publication, FM 4-30.5 is intended to replace FM 9-15 however it is still being staffed. If released in its current condition, it will be a significant improvement over the previous EOD doctrinal publications. It addresses several of the concerns related by EOD leaders and goes much farther than FM 9-15 in describing the requirement of EOD to integrate with ARSOF.

It provides broad as well as specific guidance to Army and EOD leaders on planning for and employment of EOD forces. The section most relevant to this study is Chapter 8, Explosive Ordnance Disposal Combat Support Operations. The section titled "Support for Special Missions" describes the requirement for EOD units to be prepared to support Special Forces. The publication describes the unique contributions of EOD forces employed in support of select ARSOF operations.

> To fulfill its mission to support the national military strategy, Army EOD forces must plan and prepare to support special operations forces conducting combat operations. EOD forces have skills, equipment, technical information and experience necessary to counter UXO, IED and CBRNE device threats critical to special operations mission success. When required EOD units must be able to quickly and effectively integrate EOD elements into Special Forces operations. EOD force preparation includes:
>
> • Establishing early and appropriate liaison with special operating forces units to participate in plan development.
>
> • Developing and procuring EOD specific equipment to support special operations mission requirements.
>
> • Identifying and completing special training requirements, including unique mobility skills that support early and initial entry operations
>
> • Developing training relationships to facilitate rapid integration of EOD forces. (Department of the Army 2004, 78)

A Master of Military Art and Science (MMAS) thesis written by Major Kevin DeRemer in June 2003, addresses some of the relevant issues in a his thesis entitled "Army Explosive Ordnance Disposal and Army Transformation: Is Army Explosive Ordnance Disposal prepared to support forces in the Emerging Operational Environment?" In the research paper the author reviews Army regulations and doctrinal EOD related literature, EOD structure and missions, as well as current operations in Afghanistan. The thesis spends significant time exploring the present relationship between ARSOF and EOD as well as the required capabilities EOD must possess in order to effectively operate in this environment. This material directly relates to the research questions.

DeRemer discusses the COE and its implications to EOD and ARSOF elements in future operations. He highlights several key points that are critical aspects to the new COE doctrine. Some of these include a belief that militarily overmatched enemy forces will employ unorthodox measures to deny US forces access to a forward theater. These measures may include terrorist attacks of forces throughout the deployment process or against civilian targets in an effort to sway US public opinion early in the conflict. Use of CBRN weapons and other anti-access technologies may also be used to slow and degrade US forces as they deploy and seize key terrain within the theater. This threat, if valid, would complicate or counter the ability of US forces to conduct forced entry operations.

The author also highlights the requirement of US Army forces to function in full spectrum operations across the depth of the battlefield. In support of this requirement, he recognizes that US Army forces will spend far more time conducting stability and support operations than high intensity force on force operations.

In chapter 3, Analysis, Major DeRemer uses OEF and ongoing ARSOF

operations in Afghanistan to describe Army EOD operations and requirements, individual

and unit characteristics required to support forces in Afghanistan, and the similarities

between SOF and EOD.

The EOD units supporting ARSOF participated in helicopter assaults, ground

assault convoy, and dismounted movement to and from objective areas carrying the

minimum tools and equipment required. Operations were carried out in forward areas

often requiring extensive use of night vision equipment and long-range communications.

This was a significant change and necessitated reconfiguring the individual EOD soldiers

load.

The EOD soldiers provided ordnance and IED, technical as well as tactical skills,

in support of ARSOF operations.

> SOF teams quickly realized the benefit of incorporating EOD forces into their
> teams to deal with unexploded ordnance hazards on the objective, to destroy
> captured enemy munitions, to assist with weapons "buy back" programs and to
> conduct sensitive site exploitations (searches of areas believed to be used for the
> production or storage of WMDs). EOD teams were routinely integrated with
> Special Forces A-teams, living with the team at their safe house to facilitate the
> rapid conduct of operations. While at a SOF forward operating base (FOB) or safe
> house, EOD personnel were expected to assist with security duties by taking turns
> manning fighting positions. Likewise, when conducting patrolling operations with
> conventional forces, EOD personnel had to be familiar with patrol operations and
> be able to actively participate in combat operations should the need arise.
> (DeRemer 2003, 37)

Other skills or capabilities that were often required of EOD included the ability to

conduct tactical operations in complex terrain (urban or mountainous), planning,

selecting, and marking helicopter landing zones, and participating in the planning process

at all levels to include rehearsals and brief backs. Additionally, the paper emphasizes the

need for EOD soldiers to be able to competently defend themselves during vehicle,

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helicopter, and dismounted movement. The author relates that members of the SOF community interviewed recommended that EOD soldiers retain the M-4 carbine and sidearm for operations. According to the research collected by the author, EOD soldiers were competent and prepared to defend themselves while in convoys but initially were not prepared to conduct dismounted movements under tactical conditions. This was quickly corrected.

In his discussion of the similarities between SOF and EOD, Major DeRemer highlighted several similarities between ARSOF and EOD. The first is that EOD and SOF are both specially selected. The ARSOF personnel volunteer three times as they seek to become SOF operators. They first volunteer to join the US Army, then for airborne training, and then finally to attend one of the assessment regimens for application for SOF training and eventual assignment to a SOF unit. The EOD soldier also has volunteered several times in order to be awarded his occupational specialty. He has volunteered for military service, again for six to eight months of the basic EOD course and must maintain high standards of personal and professional performance in order to retain a Top Secret security clearance. The ARSOF and EOD soldier both place a high value on innovative, creative, and critical thought. ARSOF and EOD are both expected to make decisions independent of the existing command structure while frequently working with nothing more than standard operating procedure and the commander's intent to guide them. SOF and EOD operations are undertaken by small teams geographically dispersed from each other and their command structure. Finally, both elements frequently carry out tasks that, should they fail, would have repercussions

disproportionate to the rank of the soldiers involved. The overarching message is that EOD and SOF are more alike than different.

Major DeRemer also related that nearly all of the people interviewed in support of his research related that the skills demonstrated in Afghanistan would be relevant to future operations as well. The research, conducted in support of this thesis, supports his conclusions regarding the nature of future conflicts.

This literature review includes two EOD battalion after action reviews (AAR). The first is from the 63rd Ordnance Battalion (EOD) and the second from the 184th Ordnance Battalion (EOD). These documents are relevant and useful to this research effort, because they reflect those lessons learned that the commander and operations officer deem to be of value. Of all the issues, problems, and success stories of the organization these were deemed important enough to be recorded. The command submitting the AAR does so in the hope that their parent headquarters will address issues on their behalf as well as to educate their sister units on potential problems.

The 63rd Ordnance Battalion (EOD) provided excerpts from their AAR as well as an electronic power point presentation developed by the former Battalion Commander, Lieutenant Colonel Kevin Lutz. The 63rd Ordnance Battalion's AAR articulates most of the common issues that were communicated via emails and telephone calls as well as in interviews later in the research process. The issues recorded in the AAR were predominately documented by the EOD company commanders. The company level leadership was closest to the operational problems, and leaders at this level were required to develop creative solutions in order to accomplish the assigned tasks.

The 63rd Ordnance Battalion (EOD) was the first EOD battalion to provide

dedicated EOD teams in support of Ranger operations. The initial coordination between

the two battalion commanders was direct and effective. The two leaders and their staffs

frankly described capabilities and limitations of their respective units and then

determined the optimum means of providing the support required. The EOD battalion

commander, stated that his EOD soldiers were tactically competent, and they could

defend themselves but were not "shooters." In response, the ranger battalion commander

stated that he had plenty of shooters, what he needed was EOD. This candid discussion

on roles, limitations, and capabilities early in the process appeared to minimize confusion

later (authors first hand observation August 2002).

While acting as the Combined Joint Task Force 180 EOD Staff Officer,

Lieutenant Colonel Lutz and his staff supervised three EOD companies. The companies

were located at Khandahar and Bagram Airfields, Afghanistan. The company's missions

were reduction of the UXO and IED threats to maneuver forces, destruction of CEA, and

force protection to the two FOBs. During the deployment, the battalion completed 3,050

EOD missions and destroyed 1,414,607 pieces of ordnance (Lutz 2003).

The excerpt from the battalion AAR illustrates several doctrine, training,

organizational, and equipment shortfalls regarding support to ARSOF and in some of the

items makes recommendations on possible improvements. The AAR is even more useful

with the addition of clarifying comments provided by members of the battalion staff.

The first issue, and presumably most significant to the author, revolves around

deficiencies in EOD doctrine. Forwarded to the battalion by the 756th Ordnance

Company (EOD), it describes a requirement to fundamentally change EOD doctrine from

a "force protection" to "maneuver enabler" focus. The 63rd Ordnance Battalion (EOD) also relate that most of the operations were conducted while supporting dismounted infantry using rucksacks and not trucks to carry equipment. The authors present questions regarding the validity of the heavy response team concept, confusion over roles and responsibilities in the EOD company structure, and suggest that doctrine be revised and validated with input from the entire EOD community.

The topic of training was the most commonly referenced item in the AAR. Many of the issues appear to arise from the divergence between predeployment doctrinal training focus and the actual tasks executed during the conflict. The EOD battalion commander and his staff, also describe friction arising from shortfalls in training, time management, availability of time dedicated to training wartime missions, tactical skills, fitness (for example; roadmarching), and the requirement for EOD soldiers to be prepared to adapt to a changing battlefield and operational environment.

There are several inputs to the AAR regarding equipment with the most prevalent being a lack of long-range and internal communications gear that was compatible with the supported units. Due the distances involved, EOD teams often have no means of contacting their chain of command and relied on the use of supported units tactical satellite systems to pass EOD reports and data. The other component of the communication equipment issue is internal communications. The AAR references four different instances in which having improved communications gear would have been a significant benefit. The AAR recounts that 52d Ordnance Group (EOD) has provided satellite telephones as a short-term fix, but these are not always adequate for the operations. There was also an input detailing the need for a small, rugged, deployable,

personal computer or Personal Data Assistant that could incorporate EOD and theater specific publications.

The last AAR theme relevant to this study is the degree of current integration between ARSOF and EOD in Afghanistan. The document describes the relationship between EOD and ARSOF as being good and recommends sustaining it during peacetime. The EOD battalion's officers characterized the amount of interaction between EOD and "unconventional units" as being much greater than at any time previously, with ARSOF requesting support and forward positioning an EOD team at a remote FOB or AOB. However, both groups must understand that EOD soldiers are providing their unique skills in support and are not members of the ARSOF element.

Although it appears from the AAR that EOD and ARSOF elements at the tactical level are integrated to a high degree, poor connectivity still exists between the forward EOD and ARSOF elements and their two commands. There were several instances in which ARSOF units sent incomplete or inaccurate reports regarding the size or complexity of the CEA or UXO problem. The EOD chain of command then provided a single team in what should have been a multiple team mission. This situation was complicated by incompatibility between the communications systems and the format for passing data files and photos over tactical satellite systems.

The 184th Ordnance Battalion (EOD) relieved the 63rd Ordnance Battalion (EOD) as the EOD battalion tasked to support CJTF-180. Their experiences were documented in an AAR, as well and mostly mirror that of the 63rd Ordnance Battalion (EOD). This is important as it demonstrates the issues are not unique to one organization and are in fact trends across the EOD field. Two organizations under different

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commanders identified the same problems. The 79th Ordnance Battalion (EOD) was deployed to Iraq during this period and could not provide AARs from their experiences in Afghanistan. The applicable sections of the 184th Ordnance Battalion (EOD) AAR include: desire for liaison officers at supported units, individual equipment shortfalls (dismounted operations), shortfalls in night vision and communications capabilities, and a requirement for EOD to be physically prepared to conduct dismounted combat operations. The 184th AAR also related that ARSOF would prefer that EOD soldiers receive "Close Quarters Battle Training (CQBT)" (184th Ordnance Battalion (EOD) 2004).

The electronic briefing, *EOD Lessons Learned Operation Enduring Freedom,* confirms many of the points put forth in the written AARs. It organizes the 63rd Ordnance Battalion (EOD) lessons learned into four categories: evolving missions (training shortfalls), intelligence integration (collection and dissemination), equipment limitations, and doctrinal applications.

The evolving EOD missions and environment in Afghanistan have resulted in EOD working in CS roles, supporting USSF, Ranger, coalition SOF, and light infantry operations. There was also a regular demand for EOD to conduct nontraditional tasks such as post blast analysis of mine strikes, IED and rocket attacks. The EOD soldiers were also called on to support the intelligence community in exploitation of technical intelligence, development of IED counter measures and weapons buy back programs.

These experiences illustrated a requirement for training emphasis in the following areas: planning (orders development and rehearsals); tactical skills (patrolling, shooting and moving); and advanced EOD technical skills (electronics, post-blast analysis support and car bomb procedures). Lieutenant Colonel Lutz's briefing also recommends that

EOD participate in rotations to the Combat Training Centers and that EOD battalion staffs take part in the Battalion Command Training Program and division Warfighter training exercises.

The category, titled Intelligence and Integration, refers to connectivity shortfalls of EOD forces once they are deployed. The briefing states that there have been intelligence support deficits in the past, while in the continental Unites States the battalions are reasonably well supported by the 52d Ordnance Group (EOD) intelligence officer and the national level agencies. Some members of the intelligence community that regularly support EOD are; specific cells within the Defense Intelligence Agency, the National Ground Intelligence Center, and others. These organizations provide input to EOD's deployable units through the 52d Ordnance Group (EOD) via the Army's classified wide area network (SIPRNET). Once deployed this relationship is often severed. Units without SIPRNET are often nearly cut off from intelligence support prior to deployment. This is particularly true when EOD companies deploy without their higher headquarters, or their headquarters cannot perform these functions. It should be noted that several EOD officers, while conducting peer review of this thesis, related that the quality of intelligence support remains a serious problem yet today. They conceded some improvements have been made, but remain convinced that the problem has not been resolved in the continental Unites States or overseas.

Due to experiences from OEF, improvements were made in OIF in the manner in which technical intelligence is processed. Initially an ad hoc organization was developed called the Combined Explosives Exploitation Cell. The Combined Explosives Exploitation Cell incorporated all the inter-agency and coalition organizations that had a

role in technical intelligence collection, development, and reporting. Some members include representatives from the Joint Task Force headquarters, Army EOD, Defense Intelligence Agency, Central Intelligence Agency, Joint Special Operations Task Force and coalition members. The Combined Explosives Exploitation Cell collects and analyzes reports regarding IED attacks, high technology munitions, and methods of IED employment. The objective is to identify enemy tactics, techniques, procedures (TTP), and technology in order to develop countermeasures. The Combined Explosives Exploitation Cell has been formalized and may become a doctrinal structure organized at the theater level (Lutz 2004; DeRemer 2004).

The equipment category confirmed the same issues that were identified in the 63rd Ordnance Battalion AAR (EOD), as well as provided details on the need for M4 rifles, improved night vision, laser range finders and spotting scopes, tactical environmental robotics, and electronic countermeasures. The briefing also identifies the requirement for development of an EOD dismounted equipment package.

The final category of the lessons learned is doctrinal applications. It articulates the need for EOD leadership to aggressively educate combat arms officers within the conventional forces on the subject of EOD roles, missions, and capabilities. There is confusion among some senior leaders regarding what the doctrinal roles are; how to obtain and employ EOD support. Recognizing the implication for future doctrine, Lieutenant Colonel Lutz calls for EOD to record the lessons learned and make the appropriate changes to doctrine through use of the Center for Army Lessons Learned, Combined Arms Support Command (CASCOM), and the Combat Training Centers.

Master Sergeant Troy Melillo, the CASCOM Senior EOD Combat Developer, was sent to Afghanistan in order to observe EOD operations, collect data on new EOD required tasks, validate individual and collective tasks, and to look for area to improve EOD training. Master Sergeant Melillo's input is exceptionally useful and relevant to this research effort as he was essentially conducting field research on this subject. He was present in theater and observed operations for the sole purpose of improving EOD training and ultimately the quality of support provided to the maneuver commander. One of those maneuver commanders is ARSOF.

Master Sergeant Melillo was assigned to the 184th Ordnance Battalion (EOD) from January to June 2003; however, his time was spent in forward locations with EOD companies and teams supporting ARSOF and light infantry operations. During this time, he participated in Operation Mongoose with elements of the 82nd Airborne, Operation Eagle Fury with elements of the 7th Special Forces Group (Airborne), US Navy Special Operations Forces and execution of contingency operations 745-335, as well as several unplanned enemy contacts.

> Overview: Bottom line up front, the EOD training strategy works! It is evident by the performance of EOD soldiers participating in OEF, that the technical training received in the EOD Specialist Course Phase I, II and Technical Track of BNCOC prepares them to mitigate the hazards encountered on the types of incidents/missions in the current Afghan Theater. While interviewing Commanders, Team Sergeants and First Sergeants from units that EOD soldiers provided support to; the common remark was: "The technical knowledge exhibited by the EOD teams in regards to UXO, IED's, Booby traps and Demolition Operations is phenomenal." (Melillo 2003b)

Of special relevance to this study are the contributions that Master Sergeant Melillo received from USSF leaders (captains, warrant officers, team sergeants, and engineers) when he posed the question: What additional training does EOD need to better

support your organization. Master Sergeant Melillo was careful to point out in his AAR

that the replies do not represent the policy or position of either USSOCOM or EOD;

rather they are the candid replies of operational leaders discussing what they feel is

required to conduct operations. The consensus was also that these issues, while focused

on the Afghanistan theater, are applicable to future operations in other theaters.

The first issue and recommendation involved improving the tactical skills and

situational understanding of EOD soldiers during combat operations with ARSOF and

light infantry forces. The EOD elements were a part of the supported unit's movement

formation during chance contact with the enemy (ambushes) and during planned

offensive operations, such as a DA. The AAR points out that while the technical skills

demonstrated by EOD were appropriate, it was preferred that teams receive additional

small arms and tactical training allowing them to better integrate with the ARSOF

operations. The recommended solution was to have EOD units designated to support

ARSOF operations attend the Special Forces Advanced Urban Combat Course. This is a

course designed to refine existing urban combat skills for USSF and to improve those

skills for others expected to be working with ARSOF in urban terrain.

The AAR characterizes the overlap between USSF 18C Engineers and EOD as

profound. Master Sergeant Melillo describes the two disciplines as complimentary, and

goes on to explain how they support each other well within their fields of expertise;

however, it could be made even more effective. The AAR recommends that an exchange

program be developed where USSF 18C Engineers attend the demolitions instruction at

the EOD course and that select EOD soldiers attend the demolitions portion of the

Special Forces Qualification Course. The 18Cs would receive current instruction on

disposal of large UXO and CEA caches, and the EOD soldiers would be instructed in the application of breaching charges for use during DA operations. The intent would be to improve the overall usefulness of the EOD soldier and to advance the skills of the 18C, improving his ability to conduct disposal operations in the absence of an EOD team.

As of January 2004, there was ongoing coordination between the Special Forces Center and CASCOM regarding how to best address the disparity between the USSF counter UXO tasks and the current lack of quality training. Some solutions may be provision of EOD noncommissioned officers (NCO) as instructors at the Special Forces Qualification Course, EOD instructors on temporary duty orders, and use of EOD Training Division Mobile Training Teams (Cartwright 2004; Melillo 2003a).

Initially, this research intended to review the EOD communities deployable, automated, incident, reporting system (DAIRS) reports in order to collect lessons learned and details of the EOD response. While some of this data was acquired, it was not as useful as planned. There were two explanations for this.

The first is that DAIRS use by the early deploying units was intermittent. This fact, combined with automation shortfalls, later resulted in a large portion of the data being inconsistent or erased. The irregular use and maintenance of the DAIRS program would call into question any conclusions drawn from the data.

The second reason is the nature of the information being recorded by EOD soldiers in the field. It was this author's experience, during the years 1995 to 2000; EOD team leaders often used the narrative of the DAIRS report to record a detailed log of events and lessons learned. It was incorrectly assumed that DAIRS was being used in the same manner during OEF. Whether the author's earlier experience was unique or the

current operational tempo is such that it cannot be done is unclear. If it is the latter, it is important to ask what procedure is now used to collect the critically important TTPs that EOD soldiers employ to mitigate risk. The DAIRS reports that were obtained relate that EOD teams are keeping meticulous, technical details regarding the ordnance, its configuration, and disposition.

An AAR produced by the operations NCO, Staff Sergeant Mark Simeroth, from the 754th Ordnance Company (EOD), relates six issues for the month of May 2003. The first issue is entitled "Hazardous Cargo Certification." The US Air Force is conducting resupply of forward AOBs and safe houses via fixed-wing aircraft. These flights require the regulatory paperwork be completed, certifying the cargo as properly packaged and safe to transport. All EOD teams have hazardous cargo (explosives, ammunition, vehicles). The company had only one soldier trained to certify cargo, and this shortfall became a key issue whenever resupply of teams had to be conducted. Simeroth makes several recommendations that may correct the issue, such as training a member of each EOD team or assigning a trained soldier with no other duties to execute these tasks. The author states that this shortfall has the potential to completely end EOD's ability to support operations in a timely manner.

Issues two and three readdress subjects that were covered in numerous other AARs and Lessons Learned. Staff Sergeant Simeroth's justification for improved short and long-range communications equipment at the EOD company level effectively summarizes the sentiment of many other research sources. He describes the requirement for a SOF and light infantry compatible short-range system using two justifications. The first is that the EOD teams must borrow equipment from their customers or require an

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ARSOF or infantry soldier stay with them in order to maintain communication. This creates an unnecessary manpower requirement on an already lean force. The second element of his justification was the dangerous situation that is created when all elements are not in contact during demolition operations. He relates that this type of shortfall can easily result in fratricide. Staff Sergeant Simeroth notes that all the USSF and the 82nd Airborne Division are using the AN/PRC-148 multi-band inter-intra team radio and that EOD team leaders and team members should be equipped with compatible systems.

Staff Sergeant Simeroth relates that the EOD Teams were effectively cut off from the EOD chain of command by not having an effective long-range communication system. He gives details on how use of the Iridium Satellite phone was a reasonable attempt at solving the problem, however, the low quality of voice transmission made miscommunication likely. Staff Sergeant Simeroth is concerned that EOD team leaders have no ability to transmit text or data images from the field to the EOD chain of command during an operation involving WMD (CBRN) material. He acknowledges the complexity of the issue and suggests procurement of additional hardware, which would allow the Iridium phone to be used as a wireless modem as a short-term fix.

In the fourth issue, titled "Heavy versus Light Operations," Staff Sergeant Simeroth illustrated how EOD is primarily organized and equipped to operate from their tactical wheeled vehicles. His observations were that when EOD teams operated in a dismounted role the equipment they had to choose from was inadequate for the environment. It was designed for heavy operations out of a vehicle and not intended to be loaded into rucksacks and carried into rugged, high-altitude, mountainous terrain in extreme cold weather on extended operations. In fact EOD team leaders often opted to

carry personal equipment in lieu of their issued military equipment on missions such as these. The author's recommendation is quoted below:

> If these light weight missions are going to be the way of the future we must look into creating equipment packages for these missions. Lightweight computers such as the small Tough book used with the SATCOM and disposable lightweight tools for [render safe procedure's] Render safe procedure's should be developed around this kind of mission scenario. To date teams have just been making it work instead of being properly equipped. (Simeroth 2003, 3)

The issue "Post-Blast Training" succinctly states that EOD team leaders were tasked several times to perform post-blast analysis while supporting AOB 750. He states that if EOD intends to conduct these types of tasks it must get the formal training rather than rely on team leaders indirect knowledge of munitions, blast effects, and experience with high explosives.

The sixth and final issue of the AAR is titled "Bio Hazards." Staff Sergeant Simeroth describes an event where the EOD team was tasked to conduct a post-blast analysis of a "green on green" (local nationals fighting each other) engagement that had taken place in a small room containing livestock. The floor was covered in blood, internal organs, various body parts, and the carcasses of a donkey and a cow. After clearing the room of booby traps, the team leader opted to employ local national personal with the rest of the task. The author states that he has no training in this area and believes that EOD should pursue a basic biological safety course and procure protective equipment such as gloves, shoe covers, and bags. The incident is indicative of the dynamic operational environment where leaders are required to develop innovative solutions for scenarios that have never been considered in peacetime training.

CHAPTER 3

RESEARCH METHODOLOGY

This study utilizes qualitative research techniques and structure; generally in the Grounded Theory tradition. The Grounded Theory of research recognizes the importance of cumulative experiences of several people in relation to an event or idea. The Grounded Theory research study relies heavily on interviews, field trips, and correlation of data to first hand observations. The Grounded Theory design also involves the concept of data saturation as a means of comprehending an issue's total complexity. The research tradition is primarily oriented on development of a theory (Cresswell 1998, 55-57). A graphic depiction of the research methodology is located at the end of this chapter in figure 4.

This methodology was selected primarily due to the contemporary and complex nature of the material. Incorporated in chapter 1 is an extensive introduction to frame the problem, to describe the existing relationships between ARSOF and EOD, to depict their organizational structures, and to describe their doctrinal missions. The material from chapter 1 is intended to provide the non-EOD and non-ARSOF reader a broader level of understanding of the two communities in order to better explore the research questions.

The research incorporates many of the characteristics common to qualitative research: field focused data collection, researcher as the key instrument of data collection, data collected in the form of text or words, focus on the meaning or importance of the subjects perspectives, and finally inductive analysis of data.

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A holistic, interpretive approach in collection of data was used including methods such as review of relevant documents, web based products, attendance of briefings, questionnaires, and interviews (Creswell 1998, 15-21).

In the literature review, the existing body of written material was scrutinized in an effort to increase knowledge of the issues, identifies trends, information gaps, and aid in categorizing the data. The literature review also describes the position of operational leaders in both communities as to the requirements of EOD elements supporting ARSOF. EOD officers and NCOs authored most of the written material regarding EOD integration with ARSOF, attempting to communicate to the EOD chain of command the dynamic nature of the environment, and their perceptions of EOD strengths and shortfalls with regards to supporting ARSOF.

The questionnaire was used to collect initial information and to select a group of ARSOF and EOD leaders for interviews. These officers and the subjects that participated in interviews were selected using convenience sampling. Convenience sampling is the selection of subjects based upon accessibility. It is used primarily in studies with limited budgets and time and is a non-probability method of collecting data. The questionnaire was sent to an accessible pool of officers and enlisted soldiers with the highest likelihood of facilitating the research at hand.

In this case, the decision was made to attempt collection of a sample from EOD and ARSOF leaders based upon their unique tactical and operational level of experiences in Afghanistan during OEF. Examples of the types of research subjects desired include: EOD company level leaders that planned or executed ARSOF support missions, ARSOF tactical leaders (USSF ODA or Ranger company) that employed EOD assets, and senior

leaders from both ARSOF and EOD (CJSOTF-A and EOD Battalion Commanders). Use of mass electronic mail to send the questionnaire to the entire EOD and ARSOF community, as well as an internet based survey, were considered and discarded, as this effort is more concerned with the collection of quality data rather than quantity.

The questionnaire used open-ended queries regarding the nature of the environment, mission, and organizational structure of both the ARSOF and EOD units. It also directly and indirectly requested the respondents' thoughts on how to improve the quality of EOD support provided to ARSOF. The questions were structured to elicit replies containing the details required for a complete understanding of the EOD operational requirements as perceived by EOD and ARSOF.

Early in the research process, data collected from questionnaires was reviewed identifying initial data trends. Data trends are concepts that were presented by more than one respondent within both the EOD and ARSOF populations. The data trends were discussed with two MMAS seminar classes composed of ARSOF Command and General Staff College (CGSC) students as well as subsequent interview subjects from both populations. The feedback from the MMAS seminar group and later interviews provided additional data trends and previously unconsidered facets regarding the research questions.

The data trends were reviewed and then categorized by the nature of the subject data. The five categories established are doctrine, training, equipment, communications, and organizational structure. These identified the general subject material and allowed the data to be more easily reviewed and analyzed.

Interviews were then conducted in order to explore the ideas and concepts from the questionnaire more fully. Each interview subject was asked to review and comment on the most current data trends. In this manner other subject matter experts effectively conducting a member check of the research conducted to that date continually reviewed the research. Member checks are a means of mitigating internal validity and will be discussed in a subsequent section. Interview subjects were also asked to provide their general comments on how to improve the current situation.

During the research, examples of ARSOF operations were collected that either involved or should have involved EOD support. These vignettes were collected through use of the questionnaire, interviews, and unit AARs. The interviews were primarily with officers who were students at the US Army CGSC, at Fort Leavenworth Kansas. Additionally, interviews were conducted with subject matter experts, residents on the faculty, guest speakers visiting the college, and by telephone. Examples of the collection techniques used are electronic questionnaires, digitally recorded personal interviews, traditional interviews, review of unit AAR and Lessons Learned, and the EOD DAIRS data. Data was only considered if it related to the problem.

The data was screened for relevance. Relevance was measured in terms of potential to impact to one of the domains used in the Training and Doctrine Command's Requirements Determination model. The model uses the domains of doctrine, organization, training, material, leader development, personnel, and facilities (DOTML-PF) to assist force management planners with understanding the impact of changing requirements in support of the future force objectives.

For the purposes of this study only doctrine, organization, training material, leader development domains were used. The rationale supporting that decision is based on the structure of the model itself. It is configured sequentially in order to reflect the most likely domains to impact, in terms of expense and timeliness the speed in which a new capability can be fielded. The domains personnel and facilities, while important overall, were omitted.

The research subject's opinions were readily accepted. This was consciously done in recognition of the personal nature of the data input and the strong, often emotional, feelings that soldiers have regarding their combat experiences. Additionally, these subjects, having been in the operational environment and working with their counterparts, are the experts. The nature of their first hand experiences, in reality, adds to the value of their inputs as long as it is viewed and categorized in an objective manner.

Leaders were asked to provide their input and thoughts on a complex issue that has potential impact on most other battlefield functions. For instance; should an ARSOF leader advocate EOD teams be assigned to each Special Forces ODA; adoption of that recommendation would have numerous effects on what is already a very cohesive, lean, combat organization. Each of these changes has a series of second and third order affects that impact the structure, composition, logistical requirements, and interpersonal dynamics of the Special Forces ODA. Follow-up interviews were conducted in person for those that were available and via telephone and electronic mail with those that were not.

The data collected from ARSOF and EOD research subjects were then placed into two tables (see tables 1 and 2) and organized using the five categories. The tables reflect the compiled inputs of each community organized into bullet format. In some instances

the bullets represent the synthesis of several inputs from multiple research subjects. Recurring concepts were not recorded in the interest of brevity. The tables reflect the condensation of ARSOF and EOD questionnaire and interview inputs. Concepts that were common to both populations were then extracted and placed into a third table (see figure 3).

EOD Input		ARSOF Input	
1		1	
2		2	
3		3	
4		4	
5		5	

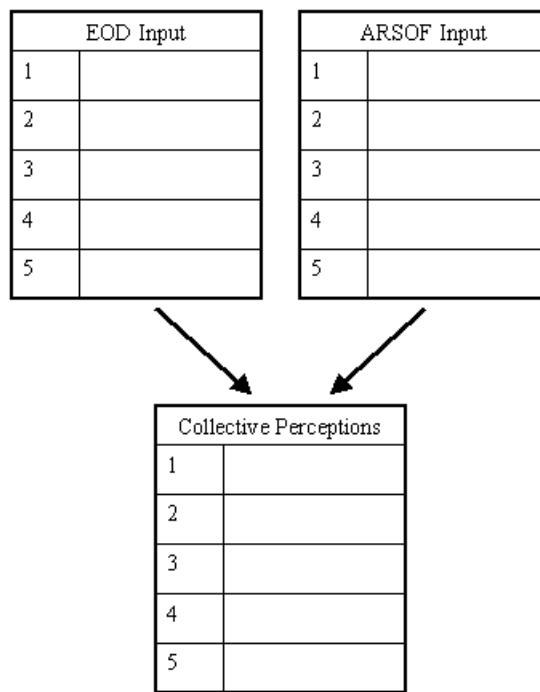| Collective Perceptions	
1	
2	
3	
4	
5	

Figure 3.   Tabulated Data Production

The final table reveals the fused thoughts of both EOD and ARSOF tactical and operational leaders involved in this research, from that through reasoned judgment, recommendations are made as to what can be done in order to better integrate EOD forces with ARSOF.

Threats to Internal Validity

One potential threat to internal validity was identified in the conduct of this research. It relates to the manner in which the samples of questionnaires were collected. The use of convenience sampling may not completely assemble a pool of respondents that are representative of the entire population. It is possible that the ARSOF and EOD officers selected to attend the CGSC do not reflect the perspectives of their entire community. It is also possible that some EOD respondents may be biased in their responses in hopes of creating what are perceived as high profile SOF assignments by advocating an increased ARSOF and EOD relationship.

Mitigation of Internal Validity Threat

Three methods were used throughout the conduct of this research to increase reliability and reduce threats to internal validity. These include triangulation, member checks, and peer review.

The first refers to a method of data collection. The method referred to as triangulation is used to collect data and then to check the veracity of my facts. Triangulation is one of the most common means of mitigating threats to internal validity and essentially uses multiple sources to check facts and to establish validity through "pooled judgment." The study incorporated two triangulation methods: multiple data sources and multiple methods of confirmation (Cresswell 1998, 202). These two methods are intended to approach data collection from several directions with the objective being identification of salient points or themes that are common to multiple sources. Whenever possible, interviews discussed the details of one operation or event with other subjects that were present or had relevant input. This satisfied two equally valuable objectives.

First it permitted the researcher to examine the event from another perspective, contributing to a greater understanding. The second benefit was the independent verification of facts. Triangulation also identified data and perspectives that were unique or exclusive to one individual or group.

Member checks are conducted when a research subject, with first hand knowledge of the material, is asked to comment on the progress of the continuing research (Cresswell 1998, 202-3). Throughout the research, EOD and ARSOF officers and senior NCOs candid input was requested after reviewing drafts of the paper. Clarification was provided on several occasions and recommendations were accepted.

The review of the evolving data trends by research subjects prior to and during interviews allowed subject matter experts to provide their thoughts on data collected previously. In at least one instance, this resulted in changes during the analysis. This method also has the benefit of providing feedback on data accuracy, format, and document flow.

In the peer review, officers previously identified as subject matter expert within the EOD, Ranger, and USSF communities were asked to review the research material and to comment on its accuracy and validity. These subject matter experts were selected from the available students at the US Army CGSC. All of these officers had experience in the Afghanistan theater of operations. Additionally, the CGSC, Development and Assessment Division, provided input and guidance concerning selection of an appropriate research methodology, as well as instruction regarding identification of threats to research internal validity and potential means of mitigation.

Research Methodology

① Problem: There is no pre-deployment integration Between ARSOF and EOD elements

Secondary Research Questions:
1. Can the situation be improved through changes to EOD Doctrine, Training, Leadership or Organization?
2. What changes if any are required of ARSOF to better Integrate EOD elements?

② Conduct Literature Review
- ✓ 1x MMAS Thesis
- ✓ EOD unit AARs
- ✓ Policy documents

③ Data Collection
- ✓ EOD DAIRS
- ✓ Request ARSOF - EOD AARs

④ Send Questionnaire to targeted ARSOF and EOD leaders
- ✓ ID future subjects for interviews
- ✓ ID trends to explore with interviews

⑤ Conduct Interviews of ARSOF and EOD leaders
- ✓ Questionnaire as initial guide
- ✓ Focus on Themes from questionnaire

⑥ Review and Mitigate Threats to Validity
- ✓ Triangulation
- ✓ Peer Reviews
- ✓ Member Checks

⑦ Analysis of Themes
- ✓ Elements of DTLOMPF model
- ✓ Feasibility, Acceptability and Suitability
- ✓ Current initiatives underway

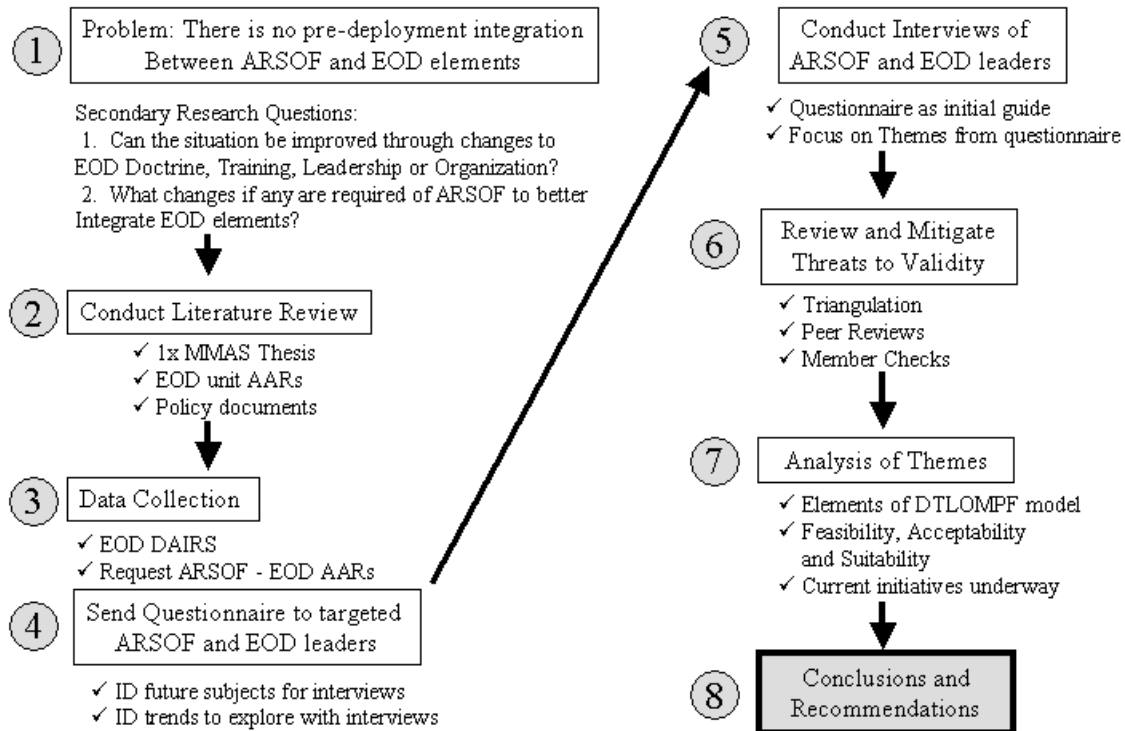**⑧ Conclusions and Recommendations**

Figure 4.   Research Methodology

CHAPTER 4

ANALYSIS

The research analysis will generally use the Training and Doctrine Command

model for requirements determination. It is the standard tool used by US Army Force

Management planners in the field of requirements determination. It employs a holistic

approach to assess all facets of a proposed change in order to insure a complete

evaluation and may be used as a diagnostics tool as well (Department of the Army 1999b,

94-96). Throughout the analysis, data in the form of excerpts from interviews,

questionnaires, and doctrinal publications will be examined. Their relevance to the

primary and secondary research questions will be highlighted and discussed.

The domains used are doctrine, organization, training material, and leader

development. Each domain will begin with a brief description of how it applies to this

research subject and will be followed by examples of the most relevant data collected

through questionnaires and interviews. In the interest of brevity, only the excerpts

presenting the most clear and succinct illustrations are included. Some interviews

addressed several domains and may be referenced in subsequent sections.

Doctrine

Doctrine products include doctrine publications, TTP, operating procedures,
regulations, checklists, or policy which governs or guides the way the military
conducts business. (Science Applications International Corporation 2004)

EOD representatives are nearly unanimous in their opinion that EOD doctrine

needs to be updated. Their positions ranged from recommendations that existing doctrine

be updated to reflect the reality of increased ARSOF-EOD interaction to the extreme of

completely rewriting EOD's primary doctrinal publication FM 9-15. The strong support

for revisions to EOD doctrine, as it relates to CS operations and support to ARSOF, relates directly to the primary research question.

The most common doctrine related issue raised by EOD subjects is that while EOD operations are most often CS in nature, EOD remains organized under CSS structures, such as the Theater Support Command and Corps Support Command. The perception is that EOD is a low priority for fielding new equipment, manning, and funding support as a result of this. This is true to some extent but not solely for the reasons referenced. This issue will be addressed more fully under the material section. This has implications that affect other DTLOM domains.

Through the review of EOD AARs and interviews, it appears as if the emphasis in Afghanistan is on enabling the maneuver of combat forces. This is done by reducing or mitigating the threat posed by UXO, booby traps, and IEDs. Colonel Celeski, Commander of 3rd Special Force Group (A), is supported by other ARSOF officers in his assessment that handling CEA slows the speed at which ARSOF can execute. Instead of prosecuting a target, exploiting it for intelligence, and moving to the next mission or task ARSOF is forced to secure CEA, account for it, load it on trucks, and then turn it over to conventional forces. In one instance, an element from 19th SFG(A) was required to secure a large cache of surface-to-air missiles for nearly a week while awaiting the decision for disposition. Major Gilliam also relates his belief that the process would have been much faster had the USSF ODA been able to employ an EOD team more rapidly for assessment of the CEA and possible destruction.

The EOD officer subjects all addressed the question of branch proponent of EOD forces. The idea of moving EOD out of the Ordnance Corps and organizing the EOD

function under another branch was addressed numerous times. This relates to the fact that EOD operations are not easily recognized as traditional CSS. There was considerable discussion regarding future units of action, units of employment, and the anticipated impact of Army transformation on future operations. The consensus, among most, was that inadequate information is available on EOD's role in transformation, and that the discussion regarding removal of EOD from the Ordnance Corps was impractical.

Colonel Celeski was the CJSOTF-Afghanistan commander for two different seven-month periods. He provided an electronic questionnaire and also was interviewed during his temporary duty to Fort Leavenworth for the OIF Lessons Learned Conference. Colonel Celeski's comments and thoughts are relevant to several of the domains.

One of his concerns was that now that ARSOF was being provided regular EOD during contingency operations and the Global War on Terrorism, the process of documenting the various TTP being used in the field must be started. His view was that operations were continuing faster than the doctrine writers can produce material.

<u>Organization</u>

Organization products and services include actual organizations needed to conduct an operation or business, the visual representation of those organizations, organizational characteristics and opportunities and challenges in utilizing them to perform an operation or conduct business. (Science Applications International Corporation 2004)

Requirements are generated and documented at the lowest possible level through use of unit reference sheets, force design updates, and table of organization development. These documents describe the unit's mission, expected capabilities, and provide information regarding the proposed personnel and equipment construct modifications. Once approved, they are incorporated in the Total Army Analysis process. Completion of

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the entire process is not always required for changes to be made. For the purpose of this research, the organization domain will primarily be used to categorize the data pertaining to development of new formations and refinement of command or support relationships.

> Do we need a habitual relationships and training? [between EOD and ARSOF] Yes. I don't know if it is with every Group but a habitual relationship that EOD is used to working with ARSOF. Yes. (Celeski 2003)

Early assessment, at the amount of predeployment integration between EOD and ARSOF forces, was confirmed through research. With one exception, there were none. In fact, in one instance USSF requested predeployment support and training from an EOD company on their installation and were denied. The justification for denying the support was a shortage of EOD personnel. The USSF 18Cs did eventually succeed in gaining access to EOD unofficially (Gilliam 2004b).

In two interviews with former members of the Ranger Regiment, both recommended that an EOD liaison officer billet be created in the regiment headquarters in order to address planning and integration issues for future operations. It was suggested by both officers that either some type of habitual relationship be developed between the Ranger Regiment, or the Ranger Regiment should pursue an organic EOD detachment to support its operations (Masaracchia 2004; Harkins 2003).

<div align="center">Training</div>

> Training products and services encompass training content and all methods of delivering that content to its intended audience which enables performance and support of the mission. (Science Applications International Corporation 2004)

Use of this domain properly insures that the correct skills are trained at the appropriate levels, supervisors are prepared to oversee the execution of new tasks, and that a program exists for initial and sustainment training. It addresses the suitability or

effectiveness of existing programs while also examining the availability of training aids, simulators, automation tools, range complexes, and allocation of materials such as training ammunition.

For the purpose of this study, there are two training concerns. The first is the individual skills of EOD and ARSOF soldiers, and the second regards the larger comprehension of their counterpart's roles and capabilities within both populations.

Several members of the ARSOF community had suggestions regarding EOD training. EOD training has been further subdivided into technical and tactical categories. Technical is concerned with traditional EOD tasks or directly or indirectly relating to EOD actions in relation to UXO, IED, or CBRN. Tactical skills are general soldier related tasks or effectively all other skills.

Research subjects from both communities discussed the tactical skills of EOD soldiers. The EOD leaders felt strongly that EOD needs additional training to raise their tactical skills to a more appropriate level. The feeling was that while EOD personnel are soldiers and maintain the basic skills required by the Army, these basic skills were not adequate for the environment within which they were working (Burton 2003, DeRemer 2003b, Guard 2004, Melillo 2003a).

The 184th Ordnance Battalion (EOD) draft AAR relates a requirement for EOD soldiers to be trained in close quarters battle. Training EOD soldiers in close quarters battle would be ideal but unrealistic. Through discussion with ARSOF and EOD leaders, it appears to be unnecessary. Genuine close quarters battle training is time and resource intensive, providing a skill set not required for EOD to support these operations. The EOD teams that conducted DAs with ARSOF in OEF were used in security roles during

the assault and seizure of the target. In some instances, they assisted in providing an outer security ring, and on other occasions they secured the breach point providing rear security for the assault element. Once ARSOF forces reduced the immediate internal threat, supporting EOD teams were called forward to sweep suspicious items or areas for booby traps, IEDs, and technical intelligence. EOD teams are not being used to assault and clear objectives. EOD must, however, be capable of operating in this environment otherwise the EOD element becomes a liability and encumbrance to the force they are supporting. The ability of EOD soldiers to operate in a supporting tactical role, while standing by for the call forward, frees ARSOF soldiers for the more direct tactical tasks.

The ARSOF interviewees relate their general support of EOD developing better tactical skills and increased familiarity with ARSOF TTP. In most instances, where the ARSOF leaders had an opinion of EOD tactical skills, the consensus was that while they may not have deployed with the requisite skills the soldiers were good pupils and with a couple of days on the range were reasonably competent.

The technical skills of EOD soldiers are in fact what the ARSOF community is seeking. The ARSOF leaders that worked with Army EOD during OEF were in one hundred percent agreement that EOD's technical skills were an asset with regards to munitions, IEDs, booby traps, CBRN, and technical intelligence. These skills were far beyond what an 18C could provide. Army EOD leaders were apparently comfortable with their supporting role and not overly fascinated with the idea of being shooters (Silkman 2004, Tate 2004b).

An area that USSF personnel would use EOD personnel was in collection of technical intelligence. A useful vignette involved a USSF ODA that had received human

intelligence regarding an Afghan national that reportedly had explosives. This was unusual in that while many Afghanis possessed weapons and munitions, this individual had what sounded like bulk explosives for use in producing IEDs. During this time, there were persistent reports of IED threats to US forces in the Khandahar area. Additionally, there had recently been three EOD and one USSF soldier killed while conducting disposals of CEA in the Khandahar area. It was immediately suspected by ARSOF and EOD that this detonation in fact was an IED attack (Gilliam 2004).

The intelligence tip was sent back through the USSF chain of command in Khandahar accompanied by a concept of operation for a DA with EOD in support. The time from receiving the initial tip through coordination and tasking to execute the DA was approximately six hours.

During the mission; USSF seized the compound, reduced the tactical threat, and called EOD forward to examine the material seized and sweep for booby traps. While on the target, the EOD Team discovered a quantity of unusual demolitions material configured in the same manner as an IED that the alleged "shoe bomber" Richard Reid attempted to detonate aboard an international flight from England to the US. The EOD soldier had additional training and understood the technical intelligence value of the material beyond the immediate tactical situation. The USSF 18C had received no training in this area and missed the worth of the material (Gilliam 2004).

EOD teams also assisted ARSOF primarily USSF with weapons buy back programs. These programs were intended to remove the high threat weapons systems, such as man portable air defense weapons and the more lethal anti-tank weapons from the local economy. EOD soldiers verified the identification, condition, and often disposed of

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the weapons or munitions that ARSOF removed from the local economy. The EOD community generally is not comfortable with programs such as this due to the increased risk of civilians being injured attempting to move the weapons or munitions.

The overall effectiveness of ARSOF and EOD can be improved through bilateral training and changes to the 18C training curriculum. Small unit exchanges and bilateral training raise the overall comprehensive understanding of both communities' capabilities and allows leaders at the tactical level to develop common sense solutions to problem. A better understanding of each other's roles will most likely result in more efficient relationships and employment of limited EOD assets.

Regardless of any courses of action implemented to develop improved habitual relationship between EOD and ARSOF, the USSF 18Cs need to develop a wider set of UXO related skills. Some of these may include increased ordnance identification and additional training in large ordnance disposal operations. It is encouraging to note that the US Army Special Warfare Center and School is working with the EOD Combat Developers at CASCOM to provide EOD mobile training teams or revised course material to address the training shortfall for USSF 18Cs (Cartwright 2004; Melillo 2004).

The USSF 18Cs (engineers) are already well versed in many demolitions tasks and have a wide range of explosives related skills. Training time in the Special Forces Qualification Course is limited. The challenge then becomes determining exactly what UXO tasks the 18Cs are going to train on and at the expense of what other skills?

The development of counter UXO skills by Ranger breachers is not a realistic option. The Rangers retain a well-developed ability to use explosives to rapidly open locks, doors, and walls. However, breaching and UXO destruction are fundamentally

different disciplines. Each requires detailed, initial training and sustainment training but the UXO destruction task also requires extensive knowledge of US and foreign ordnance. The Rangers are already saturated with training tasks in addition to their demanding tactical training.

> The bottom line, [regarding adding additional UXO related training for 18Cs and Rangers] I'm speaking on the behalf of a Ranger Company Commander, I do not want anything else on my training plate that I have to be an expert at and you damn well better be an expert at destroying UXO. We cannot afford to send guys up to the school [EOD school] to get them trained and what is the life expectancy of that training? I am taking a shooter out of my stack to do this. It is easier to get somebody else. If we are going to stay in this business we have to consider a permanent EOD LNO at the Regimental Headquarters. (Masaracchia 2004)

<u>Leadership Development</u>

Leadership deals with management and implementation of change across the DOTMLPF spectrum (Science Applications International Corporation 2004).

This domain relates to NCOs' and commissioned officers' development and education programs. The programs of this domain are constantly in motion as resident and non-resident courses for officers and NCOs evolve. Periodic reviews are conducted to insure that curriculum remains relevant and is providing leaders with the correct skills to satisfy current and future Army requirements. The research identified three leadership development areas that would benefit from review and possible revision.

In the first, Colonel Celeski describes an internal education issue for ARSOF leaders. Historically, ARSOF has developed creative non-doctrinal solutions to fill the gap when CS, CSS, and other specialist's skills were not available. Now that ARSOF understands EOD forces are in the pool of available forces to support contingency operations and the tactical units have become more familiar with each other, Colonel Celeski related that ARSOF should begin conducting formal requests for forces prior to

deployments. He described a change that, if implemented, would allow USSF to increase their operational capabilities by using EOD in the execution of their doctrinal mission. This would include provision of liaison officers and planners when appropriate.

EOD representatives related the second leadership development issue. They were in the grades of staff sergeant through lieutenant colonel and described how the operational environment that EOD soldiers are working within has changed dramatically. Their concern is that the EOD leadership must adapt as well. In several interviews and in questionnaires, there were inputs provided by EOD soldiers that described their perception that some leaders are unwilling to embrace SOF support missions (Larry 2004, DeRemer 2003b, Burton, 2003). Staff Sergeant Standley describes it as an issue for both SOF and EOD leaders as they begin to understand that EOD and SOF are not that different. Both are highly trained within their respective disciplines and work in small teams. Master Sergeant Melillo and Major Masaracchia join SSG Standley in a call for EOD to continue selecting fit, mature, and confident EOD team leaders for support to future ARSOF units. This is supported by the AARs from the 63rd Ordnance Battalion (EOD) when they recommend that teams be lead by a sergeant first class in lieu of the traditional staff sergeant. There is some disagreement within the ranks of the EOD research subjects on the how to best structure EOD companies and teams; nonetheless, they are all agreed that the leaders selected to work with ARSOF must be technically and tactically competent (in that order), physically fit, and capable of creative critical decision making with little guidance.

The EOD leadership education issue highlighted by Colonel Celeski, and echoed by several EOD officers, is centered on non-doctrinal missions. He describes how units

with unusual skill sets (such as EOD) must have the capability and willingness to

embrace non-doctrinal missions in support of the Joint Force Commander's objectives.

He provided an example of what he meant. As Commander of CJSOTF-A, his superiors

at CJTF-180 asked him if SOF could collapse some caves that airpower could not strike.

He considered the general skills of his SOF units and the importance of the mission and

replied that they would attempt it. While none of his units have ever trained for this task,

they were the most responsive and qualified force to accomplish the Joint Force

Commander's intent. The Colonel goes on to describe the changing nature of the

battlefield and how highly trained units such as ARSOF and EOD can make significant

contributions to theater objectives but must be willing to allow subordinate leaders to

take reasonable risks based on their training, experience, and assessment of the situation.

The final leadership development issue is derived from the concerns of EOD

research subjects regarding the ability of junior officer and EOD team leaders to

differentiate between ARSOF support operations and ARSOF membership. Major Tate

related that while in Afghanistan as the EOD battalion Executive Officer, an USSF

officer related that some EOD forces were preoccupied with trying to be shooters and not

focused on providing the skills actually required by ARSOF.

> All involved need to better understand the special skills the other uses and
> why they are important. A SF guy recently told me the problem he had with EOD
> (they had been Navy) support was that they wanted to be shooters, he appreciated
> that but he didn't need shooters he needed EOD. We must train and familiarize
> our soldiers with their importance as EOD troops and get them to feel
> comfortable, that they are not SF wannabes. (Tate 2004b)

This directly impacts the secondary research question: Can the existing

relationship be improved through changes in EOD doctrine, command and control,

organization, or material? EOD must continue to develop leaders that understand their

supporting role and are capable of fostering command climates where soldiers appreciate the value of their advanced technical skills.

Material

Material products are traditionally what have been associated with the defense acquisition process. Weapons, platforms, communication equipment, medical equipment, transportation, training software. (Science Applications International Corporation 2004)

It is the domain that describes the weapons systems, communications, vehicles, automation tools, and other equipment that is used by a particular organization in the conduct of its mission. It is the most traditional domain within the model as it bears the most visible result and resembles the long-standing defense acquisition process.

Historically, the Department of the Army Master Priority List established by the Department of the Army, Deputy Chief of Staff for Plans and Operations set the priority for provision of manpower and material throughout the US Army. It was an established procedure for structuring the support to various Army commands based upon the requirements of the National Military Strategy, The Army Plan, (TAP), and approved regional combatant commander's operational plans. Essentially, forces that were required to execute an existing operational plans were ranked in descending order with early deploying units receiving the priority of support. The reforms in force modernization, procurement, and manning instituted by Army leaders are too new to be remarked on.

CS and CSS units are directly behind the major combat units that they support using requirement objective code positions. In the 98-03 DAMPL, EOD was listed as a Position 3 requirement objective code. Position 1 and 2 requirement objective codes are forward deployed commands such as the European Command and Central Commands, as well as early deploying CS and CSS units identified in the regional combatant

commander's operational plan. EOD units are not manned or equipped at a high priority because the Joint Force Commander or regional combatant commanders have not articulated a requirement for them early in their operational plans.

The recent expanded demand for EOD forces resulting from operations in Afghanistan and Iraq may result in increased visibility at the regional combatant commander level. Increased requirements for EOD support may result in select EOD units having their operational plan arrival date shortened. Another benefit of regional combatant commander advocacy is the eventuality of receiving increased prioritization outside the sphere of existing operational plans. EOD will not improve their equipment issues without receiving increased visibility from the leadership of the units designated to fight the primary conflicts.

Potential drawbacks of increased visibility are the increases in operational tempo and taskings that are certain to accompany it. The existing EOD force is already 100 percent employed in operations in Bosnia, Kosovo, Iraq, and Afghanistan as well as a full time domestic mission. Increased missions without careful consideration of the potential manning and structure changes to support new requirements would not be helpful. In fact, accepting strategic and operational level missions without insuring absolute support would be counterproductive.

EOD Support to Rangers in Operation Iraqi Freedom

Although this research primarily uses examples of ARSOF and EOD interaction in Afghanistan during OEF as the vehicle for studying the problem, the research highlighted two significant related events. The two events indicate a requirement for

integrated EOD teams, capable of rapidly supporting ARSOF in the execution of missions across the full spectrum of military operations. .

The first was described by several research subjects including, Major Steve McGugan, 75th Ranger Regimental Engineer and Major Kevin Titus, 75th Ranger Regimental Chemical Officer.

In the months prior to OIF, elements of the 75th Ranger Regiment were tasked to seize a specific airfield in the western Iraqi desert in support of theater war plans. After seizure of the airfield and clearance of the obstacles, follow-on units would use the airfield as a FOB. The designated target had the requisite characteristics for use as a FOB, but obstacles on the runways and taxiway complicated the operation. Supporting intelligence assessed that these obstacles (dirt mounds and barrels) were likely booby trapped or may be protected by IEDs (Titus 2003, McGugan 2003).

The plan called for the assault element to conduct static line airborne operations in order to seize a portion of the airfield and rapidly clear the obstacles. This would allow for the remainder of the assault element to air land and rapidly build combat power. A requirement for an EOD element to participate in the airborne assault in order to reduce the booby traps, IEDs and UXO threat on the immediate objective was identified early in the planning.

Planners conducted coordination with Army EOD in order to explore the possibility of their supporting the planned operation. It was determined that Army EOD had no airborne trained units. The only service with EOD forces on airborne status is the US Navy. Army EOD was preferred due to their emphasis on and experience with ground ordnance, as well as ease of integration. Army EOD could not support the mission, and it

was passed to the US Navy. A US Navy EOD element was included in the Request for

Forces and subsequently a team was organized and participated in pre-deployment

planning sessions and several full-scale rehearsals (Titus 2003, McGugan 2003).

Ranger units that did not have access to the small Navy element executed

numerous other missions, supporting theater operational objectives that required EOD

support. The Regimental Chemical Officer, Major Titus, was involved in the deliberate

and crisis action planning and relates the following.

> During the first days of OIF we secured an airfield in Southern Iraq [not
> the same as above] with a ground element. This runway was covered with UXO.
> We required EOD personnel to safely clear these UXO from the runway. This was
> an unplanned event. Imagery did not pick-up these hazards. An EOD team was
> sent in to clear this airfield. It turned out that these UXO were cluster bombs from
> Desert Storm. The significance is that we did not have the organic capability to
> safely handle these UXO. Rangers are highly trained at using explosives for entry
> into buildings or blowing things up. Rangers are not skilled at keeping things
> from blowing up ie. UXO or IEDs. (Titus 2004)

Another vignette provided by Major Harkins, describes his frustration at not

having the capability to properly dispose of massive quantities of CEA.

> I can think of several operations where an EOD guy would have been handy. The
> general scenario was a raid or exploitation that uncovered a large cache of
> weapons and ordnance, typically in a densely populated area. The caches
> contained everything from small arms, RPGs [rocket propelled grenades] mortars
> and mines to anti-aircraft weapons. We would typically try to destroy the
> weapons that we could but, explosives and ammo were too dangerous to do
> anything with. The amount of ammo we discovered and then left would probably
> fill an Olympic swimming pool. It was frustrating for me and my leaders because
> we felt we were leaving these weapons and equipment for the bad guys, but
> beyond reporting to higher and passing the info to our LNO [liaison officer] there
> was little else we could do. Perhaps an EOD guy in our TOE would have given us
> other options. (Harkins 2003)

Major Harkins describes a situation also discussed by USSF based upon their

experiences in OEF. The concern is even greater today now that it is known that nearly

all of the IEDs targeting US forces in Iraq and Afghanistan incorporate an explosive charge provided by enemy artillery, rockets, or mines.

An additional concern not addressed by research subjects is the chance that ARSOF soldiers with limited available time on a target will not be able to identify high threat munitions for destruction or recovery. The result may be a missed opportunities to remove an opponent's man portable air defense missile or effective anti-armor weapons.

<u>Tabulated Data</u>

The three tables below represent the summary of the various inputs derived from the questionnaires and interviews. The data was organized into the five categories: doctrine, training, equipment, communication, and organization. All of the inputs were characterized as one of the five categories. Some of the closely related recommendations were synthesized into a single line entry. The first table is the summation of EOD inputs from EOD and the second table is the ARSOF summary. The final table reflects the data points that were common to both populations.

Table 1.   EOD Tabulated Data

EOD	

Doctrine	- EOD is structured under CSS domain, but doing CS functions
	- Current EOD doctrine only allows for uncommitted GS EOD TMs to support SOF
	- Inadequate for the actual operational tasks:
	  Combat Support opns vs Force Protection doctrine
	  Dismounted opns with Infantry and SOF vs vehicle based opns
	  EOD needs integration in mission analysis at all levels
	- Commanders do not know EOD and Engineer roles and limitations

Training	- Formal Post Blast Analysis training required for all EOD - Request battalions establish a cycle for opns, training and support - Units require more tactical training, prior to deployment - Emphasis on mission planning with supporting enablers (aviation, trans, medics) - Units require more dedicated training time for wartime missions - Non-wartime tasks significant impact on training wartime missions - Obtain training and supplies for operations involving biological materials - More Hazardous Cargo Certification trained personnel required
Equipment	- EOD tools not adaptable to field conditions Automation too bulky, complex and not user friendly - EOD demolitions and Render safe procedures require update (light or disposable tools) - New explosives are vastly more efficient than current options - Robotics must be man-portable- suitable for environment (or not used) - Heavy and bulky equipment during light or dismounted operations - Units require M4 optics-night vision; EOD ineffective during low light - EOD protective gear does not provide protection from blast and ballistic threats - EOD chemical and biological detection capability is limited - Available robotics very limited in rugged terrain - Require vehicles with an integrated crew-served weapon for security
Communications	- Lack secure interoperable commo (long or short range) - Long Range commo must be satellite based due to distance - Supported units sending EOD messages on their systems - Borrowing short range ("hand held") from supported units has negative impact
Organizational Structure	- Manning of units is critical (product of recruiting and school throughput) - Confusion on value of Heavy Teams vs Light Teams - Desire for earlier involvement in Mission Analysis with ARSOF - Liaison officers with ARSOF during EOD planning and operations preferred - Liaison officers lack common automation-media format - EOD Battalions and companies not task organized for optimal support

Table 2.   ARSOF Tabulated Data

ARSOF	
Doctrine	- No doctrine known to ARSOF, no pre-existing relationships - ARSOF able to employ "enabling forces" to maximize effectiveness - EOD doctrine should allow adaptation of skills to the operational requirements in support of theater objectives (non-traditional roles)
Training	- ARSOF leaders need to understand EOD capabilities - EOD technical skills were exemplary - Tactical skills mostly acceptable, soldiers were quick learners - Some teams required train up once forward deployed to FOB and AOBs - SF 18Cs not trained for EOD work, but will do it if EOD not available - EOD as alternate breacher: Rangers do not support it, SF mixed response - EOD soldiers must be fit and able to maintain dismounted pace - EOD units in an ARSOF habitual relationship must be screened (psych at a minimum) - ARSOF should be prepared to receive and support allocated EOD teams
Equipment	- EOD should have mobility platforms (GMVs, HMMWVs, etc) - EOD needs full night vision capability in order to integrate with SOF (NODs and optics) - EOD soldiers should be equipped in a similar manner as ARSOF - Prefer that EOD utilize ARSOF log system to the greatest extent possible
Communications	- EOD requires equitable short range commo (ARSOF continues to lend) - Mixed review on EOD requirement for long range commo
Organizational Structure	- Desire for earlier integration (prior training, mission analysis, planning) - EOD not available unless forward based at AOB / Safehouse - EOD Staff Officer or LNO ele. required at Bn or Grp (plans and liaison) - Confusion on why EOD is not in USSOCOM (like civil affairs and psyops) - USASOC needs organic EOD, size, composition and level unknown - Rangers desire EOD relationship, Ranger trained with basic mobility skills

Table 3.   Collective Perceptions

Collective Perceptions	
Doctrine	- ARSOF and EOD must develop pre-deployment habitual relationships - EOD should be more receptive to non-traditional roles in support of JFC
Training	- EOD-ARSOF must engage commanders at all levels in order to increase understanding of roles, responsibilities and limitations - EOD technical skills were exemplary - Increased tactical training at the EOD team level - USSF 18C requires increased UXO training (regardless of other initiatives) - ARSOF should begin requesting EOD assets when appropriate (RFF process) - EOD in support of ARSOF must be prepared for dismounted operations - Enabling ARSOF's rapid mobility and development of intel should be an EOD focus - EOD units in habitual DS relationships should refine their training tasks
Equipment	- EOD needs full night vision capability in order to integrate with SOF - EOD and ARSOF require compatible data transfer tools / systems
Communications	- EOD requires an equitable short range commo system - Consider equipping EOD units supporting with long range commo system

<u>Initiatives Currently Underway</u>

Lieutenant Colonel Karl Reinhard, the Department of Army G3 EOD Staff Officer, related in a March 2004 telephone conversation and subsequent interview, his thoughts regarding EOD support to ARSOF and some of the actions that Army EOD is considering in order to improve the existing relationship. He related that he personally had no experience with ARSOF other than providing an EOD company in support of OEF but that EOD leaders recognized the increasing importance of tailoring a force to support ARSOF.

As the sole EOD Officer within the Department of Army, Operations staff, Lieutenant Colonel Reinhard has responsibility for overall policy staffing of Army EOD issues, doctrine, funding, and future initiatives. His duties include advising the Army and Joint Staffs on the Army EOD program. In this position, he has visibility of all EOD related issues within Department of the Army, Operations Staff.

Lieutenant Colonel Reinhard related that, although previously there has not been significant demand for EOD to support ARSOF, Army EOD has recognized the significance of the EOD lessons learned in Afghanistan, as well as the likely nature of future contingency operations and the Global War on Terrorism. The assumption is that requirements will continue to increase.

Early in the dialogue, Lieutenant Colonel Reinhard discussed a proposal to garrison several of the recently approved EOD companies on installations with Special Forces Groups and Ranger battalions. The companies may be organized under one EOD battalion or could be independent EOD companies assigned to the 52d Ordnance Group

(EOD). When asked if the EOD battalion would be committed exclusively to ARSOF, he was not certain that there would be enough work to justify it.

During the discussion and subsequent correspondence Lieutenant Colonel Reinhard commented on the subject of habitual relationships, which was an early and persistent data trend. One of the most common recommendations from both EOD and ARSOF research subjects is the need for some form of formal habitual relationship between the two communities. The designated EOD units would be co-located with ARSOF formations to the extent possible and would have direct liaison authority. This would entail joint review of unit training calendars with the objective being mutual agreement on what ARSOF training EOD would participate in as well as insuring that EOD companies have dedicated time to sustain their technical skills.

This relationship would improve understanding of EOD capabilities and roles on the part of ARSOF leadership. It would also develop an EOD element that has internalized the customer's unique standard operating procedures as well as appropriate TTP.

The command relationship between the EOD units and their customer would be a concern to EOD. Some EOD officers have related that in order for EOD to maintain the quality of their technical skills, the units should remain assigned to a Forces Command (FORSCOM) EOD organization. Their concern stems from the perception that EOD elements assigned as organic subordinate elements to ARSOF, without a battalion level command, would steadily lose access to EOD institutional knowledge. The highly technical nature of EOD work and the evolving threat requires constant effort to remain

current. The need for an intact EOD chain of command to insure that technical training standards are maintained is required (Reinhard 2004; Tate 2004b).

Lieutenant Colonel Reinhard was interested in the subject of command relationships and several possible solutions were discussed. During the exchange the idea of using what is known as directed training affiliation (DTA) was discussed. The 19th Special Force Group (Airborne), Army National Guard, has aligned their battalions through use of a DTA to an active component Special Forces Group. Established plans accept that should the active component Special Forces Group deploy, the ARNG battalion would most likely participate in some manner as well. This relationship allows the wartime commander to have input to training programs, develops a peacetime working relationship between the commands, and gives him visibility of the unit's capabilities during peacetime.

In the case of EOD and ARSOF, it would allow the supporting EOD chain of command to orient their tactical, environmental, and mobility training programs on tasks that best support a designated ARSOF unit while retaining an EOD focus on their technical skills. The regional orientation of the Special Force Group may also assist in refining the designated EOD unit's training program as well.

The correspondence and conversations with Lieutenant Colonel Reinhard illuminate a desire on the part of Army EOD to engage with ARSOF on this issue. It must be noted that no decisions have been made and it is one of many topics being reviewed with senior leaders within Ordnance Corps and EOD (Reinhard 2004).

While EOD is willing to consider habitual relationships and aligning an EOD battalion with ARSOF, efforts on the part of EOD to answer questions regarding numbers

and composition of units must be undertaken with input from ARSOF. Any serious reflection on the subject should begin with a combined understanding of the roles, capabilities and limitations of each organization. Questions regarding the command or support relationship, tactical tasks, and expected operational tempo must be undertaken in collaboration with ARSOF.

<u>Support to Counter Proliferation of CBRN</u>

Colonel Lowe, Chief of the Joint Special Operations Command (JSOC), CP Division, described a shortfall in the structure of CBRN capable forces available to ARSOF. He related that while the conventional forces have both EOD and organic nuclear biological and chemical units, they have not been directly tasked with a CP mission. Only SOF has a direct tasking to conduct and provide support to CP missions, and within SOF a very small pool of specialized units have organic EOD and nuclear biological and chemical capabilities (Lowe 2003).

The conduct of CP and support to CP missions are tasked to Special Forces and Ranger units in their doctrinal publications in FM 3-05.20, *Special Force Operations* June 2001 and FM 7-85 (Draft), *Ranger Operations*. In the Rangers case, under the CP mission area they may be tasked to seize and recover WMD [CBRN].

Despite the fact that USSF CP missions seem to be focused on identification of production facilities, confirmation of the presence CBRN, and interdiction of delivery systems; there is the possibility that USSF will encounter a weapon or material in production, trans-shipment, or delivery (Department of the Army 2001). Given the dynamic nature of the operational environment, it is not unreasonable to anticipate a situation where ARSOF may encounter CBRN material or weapons inadvertently.

Neither USSF nor Rangers have an EOD capability and as such they have no capability to conduct render safe procedures in the course of a CP, DA mission. Both have a limited nuclear, biological, and chemical capability. The Special Forces Groups have Chemical Reconnaissance Detachments organized under each Special Forces Group and the Rangers have the standard chemical officer and chemical NCOs assigned. The Chemical Reconnaissance Detachments and Ranger units both lack the detailed training regarding ordnance and IED that an experienced EOD team leader could provide.

> During operations in Iraq we were sent against many targets that had potential to be WMD sites. Rangers are trained at surviving in a Chemical or Biological environment but very few Rangers are trained in handling these weapons. No Rangers are qualified to render safe these devices if they were to find them. This is a definite shortfall in capability. The requirement for rendering safe Chemical, Biological, Nuclear and Radiological weapons is apparent. Rangers were actively engaged in the search for these weapons. Had the need arisen it would have had to be brought in. During the initial tactical situation this would not have been possible. (Titus 2004)

The 52d Ordnance Group (EOD) commands two WMD companies, each with CP missions. These EOD companies, in close cooperation with the Department of Energy and other members of the inter-agency community, maintain robust advanced technical operations skills with regards to CBRN weapons and materials. The EOD soldiers are specially assessed and screened prior to assignment, regularly participate in classified programs and are in a nearly continuous technical training cycle with Department of Energy's national laboratories and other Department of Defense commands.

Any decisions regarding aligning EOD units with ARSOF should carefully consider the history of these two units and their current missions. There are several reasons to consider including them in an ARSOF support structure. First and foremost, their mission is specialized and the roles and training are fundamentally different from

that of their counterparts in conventional EOD battalions. It would ease the process for

ARSOF to receive training and support from these specialized units. Finally, ARSOF has

a CP mission; these two units are tasked and trained to conduct CP support missions.

<u>Two Ways It Could Be Done</u>

It would be irresponsible to presume that this study has the necessary fidelity to

articulate the two organization's current requirements and desires; however, it would be

useful to communicate some of the alternatives that came to light through the research.

The concepts presented here are intended for later use as discussion points between the

EOD and ARSOF communities.

<u>ARSOF Development of an Organic EOD Capability</u>

With the increased prominence of SOF within DOD plans, should ARSOF choose

to pursue an internal EOD capability through a force design updates, there would likely

be only limited resistance. Several of the research candidates, both EOD and ARSOF

recommended or discussed the possibility of developing EOD units internal to USASOC.

In broad terms there are several benefits to an organic EOD element within ARSOF.

Creating an organic EOD capability within ARSOF effectively solves the

integration problem. In the case of USSF, the most common recommendation was the

creation of a robust EOD company internal to the 528th Special Operations Support

Battalion (Airborne) or its parent unit the Special Operations Support Command. The

Ranger subject matter experts related that although each Ranger battalion would likely

favor dedicated EOD elements, there was acknowledgement of the limited quantity of

EOD units. The recommendation was to locate a centralized EOD company with the 75th

Ranger Regiment. Subordinate EOD platoons or teams that were focused on each of the

three Ranger battalions or the five active component Special Forces Groups was preferred

by both USSF and Ranger representatives in order to alleviate the impact of the increased

OPTEMPO (Titus 2003, Harkins 2003).

> Before 9/11 one element would have been optimal. One element could have supported whatever battalion was in need of EOD support. Since 9/11 the Regiment has been continuously deployed. One element would have been burned out if it provided continual support. (Titus 2003)

> With the development of an organic ARSOF EOD element representatives from

both communities described the need for the soldiers to be fully integrated with cyclical

tactical training and to be capable of the full range of mobility skills.

> [Regarding EOD mobility skills] It would not have done me any good to have them if I could not get them to the battle. Having them be able to go everywhere a Ranger goes is a requirement. You have got to be able to jump on an airfield seizure. (Masaracchia 2004)

> In the case of the Ranger Regiment, a requirement for the soldiers to be Ranger

qualified was articulated as well. Majors Masaracchia and Harkins both described the

system that 75th Ranger Regiment uses to manage training. The joint operations

readiness training system is a highly structured mechanism for units to balance tactical

and technical training from the individual rifleman, medic or breacher up to collective

and joint training at the general officer level. Each cycle culminates in a Joint Readiness

Exercise or other major exercise and often integrates the Geographic Combatant

Commander's SOF forces. The Joint Readiness Exercise cycle dedicates time for

individual, collective and joint training evolutions as well as provides dedicated time for

supporting units to train their technical skills (Harkins 2003; Masaracchia 2004).

> The establishment of a USASOC internal EOD capability would also address

several of the other recurring problems articulated by EOD commanders and team

leaders. It is implied that a force created within ARSOF would be equipped in such a way as to allow seamless integration. Provision of individual weapon, optics, communications, night vision devices, and mobility platforms would be required.

As noted previously, numerous EOD representatives were supportive of improving the predeployment relationship between EOD and ARSOF, but several opposed the idea of developing a company level ARSOF internal EOD element. Their opposition to the idea is based on concerns regarding EOD soldiers and leaders ability to maintain emphasis on their technical skills in an ARSOF organization. They believed that removal of EOD trained soldiers from a homogenous EOD unit would result in the units spending more time focused on tactical tasks at the cost of their EOD technical training. Their fear is that without an intact EOD battalion level command structure to coordinate with senior ARSOF leaders, the younger less experienced EOD leaders may not be able to maintain an appropriate sense of balance between tactical and technical training (Tate 2003, Rheinhard 2004).

<u>Develop Predeployment Habitual Relationship</u>

Development of habitual relationships will also effectively resolve the problem of improved integration with ARSOF. Again, the particulars of this affiliation must be developed between FORSCOM, 52d Ordnance Group (EOD), and ARSOF. However, recognizing that, the following points regarding habitual relationships are provided for consideration.

One of the most important concepts discovered through the numerous discussions with ARSOF research candidates was the concept of DTA, discussed earlier. The DTA aligns elements from different commands without incurring the lengthy coordination and

approval process required to apportion EOD forces directly to ARSOF. An additional

benefit of the DTA is that it appears to allow the two commands to retain some degree of

flexibility in how they internally task organize forces. The establishment of a DTA

between an EOD battalion and USASOC would provide a means for the maneuver

commander to provide focus and input to training programs through use of a mission

letter.

Recent analysis by the Ordnance Corps, Department of Army and FORSCOM

EOD regarding how to best support ARSOF, as well as their willingness to consider

habitual relationships for specified EOD units in support of ARSOF is significant.

Several EOD research subjects related that over the course of their careers they had

observed an institutional reluctance on the part of EOD to embrace ARSOF support

missions (Tate 2004; DeRemer 2003a, 2003b; Weber 2004; Larry 2004). This appears to

have been overcome in recent years. The operational experiences of ARSOF and EOD

leaders at the tactical level during OEF in Afghanistan are reflected in their AARs,

lessons learned documents and in the interviews conducted in support of this research.

> If we worked out the details I know that the 52d would bend over backwards to
> make sure that our soldiers are trained and ready to support SOF. We have a
> pretty long laundry list of things to do. But we are not reluctant to add something
> to our list of missions or critical tasks. As the Group CSM and senior Army EOD
> NCO, my only concern is that we not enter into some ad hoc situation where we
> put soldiers in over their heads. If SOF came to FORSCOM with ideas for an
> ongoing relationship I'd listen eagerly. I know that many of our troops would love
> it. I would just want ensure that we put well trained troops out shoulder to
> shoulder with the SOF guys. So, we'd need to define the mission, determine the
> training and equipment requirements, figure out how to do it and then proceed.
> (Clifford 2004)

While conducting this research several inconsistencies were identified in the data.

The most drastic and potentially most significant was the differences between data

returned by the 1st Special Forces Group (A) which is oriented on the Pacific Command

and the information provided by the Pacific Command EOD Staff Officer. The USSF

Staff officer related, that there was no EOD involvement during OEF-Philippines. The

Pacific Command EOD Staff Officer related that the US Marine Corps EOD supported

special operations in OEF-Philippines. Additionally, 7th Special Forces Group (A)

related that they had collected numerous replies and comments to the initial questionnaire

and would provide them after review by the chain of command. No data was provided.

Recognizing that the current OPTEMPO is high, it is not surprising that responding to a

request for information could get a low priority assigned to it. Should further research on

this subject be considered, these are open leads that may still yet produce quality data.

CHAPTER 5

CONCLUSIONS and RECOMMENDATIONS

Conclusions

The requirement for improved integration between EOD and ARSOF clearly

exists. There is substantial support for improved predeployment integration from tactical

leaders within EOD and ARSOF. The degree of that integration and the resultant

adjustments to doctrine, training, leader development, organizational structure, and

material must be determined in a collaborative effort between USASOC, FORSCOM,

and 52d Ordnance Group (EOD). The coordination between the two communities should

be undertaken with Department of the Army's concurrence and visibility in order to

insure the proper degree of support and sustained emphasis.

Development of a habitual support relationship between an EOD battalion and

several subordinate companies answers the primary research question: What is the best

means of integrating EOD with ARSOF? Aligning a to-be-determined number of

independent EOD companies with USASOC, while a reasonable immediate measure, is

not feasible as a long-term solution. It offers technically competent, mission focused

EOD units to support ARSOF but fails to fulfill the long-term technical skill sustainment

and planning capability required for optimal usage of a limited asset.

Aligning an EOD battalion and its subordinate companies with USASOC through

use of a DTA appears to be the most promising of many options capable of addressing

the problem of improved integration. The DTA develops a peacetime bridge between the

supporting EOD units and their most likely ARSOF customer while still allowing the

EOD and ARSOF units to retain their original command structure.

This thesis is the most comprehensive and current research done to date regarding EOD support to ARSOF. There has not been a previous effort to determine what changes are required in order to optimize these limited assets. In this period of constrained funding and increased operational commitments, it is critical that military leaders consider new ways to maximize effectiveness. The most recent EOD battalion in Afghanistan performed two thirds of their missions in support of ARSOF (Whitley 2003).

This thesis research advocates provision of EOD elements to ARSOF, either through ARSOF's development of an EOD force structure internally or through a habitual relationship (preferred). This is in no way intended to imply that EOD should not continue to remain focused on their primary customer: the brigades, divisions, and logistics units that make up the preponderance of the US Army's forces.

<u>Recommendations</u>

The first recommendation is that USASOC articulate a desire to improve integration with EOD. With USSOCOM's concurrence, this initiative will assist the efforts of officers at Department of Army G3 (EOD) and FORSCOM EOD as they attempt to address the issue. Their efforts must be properly coordinated with the supported maneuver commander, in this case Commander USASOC. In concept, this will result in a small EOD-ARSOF working group being assembled. Members of the working group would need to rapidly educate each other, communicate expectations, and then mutually agree to objectives. Some of these objectives would address the questions of doctrinal training, leader development, and organizational and material requirements. The objectives will effectively answer the secondary question of: Can the existing relationship

be improved through changes in EOD doctrine, command and control, organization, or material?

The second recommendation is, as soon as possible, FORSCOM EOD should take action to align at least one EOD company with ARSOF. Take the required administrative steps to have a number of teams and a command and control element placed on jump status. Send the assigned airborne trained EOD soldiers to airborne refresher training, procure the small quantities of mission peculiar equipment that would be required, and then place the teams on jump status. Regardless of USASOC's initial support for this initiative, Army EOD must be able to support airborne operations. EOD is charged with the mission of supporting the National Military Strategy and theater objectives. In addition to the airborne operations related previously, the 173rd Airborne Brigade conducted an airborne assault in OIF. Had the 173rd's operation been strongly opposed, Army EOD would not have been able to get into the fight to support them.

A representative from EOD preferably 52d Ordnance Group (EOD), FORSCOM, battalion commander, or operations officer should contact USASOC in order to discuss a mission analysis, training tasks, development of an interim airborne EOD capability, and potential future missions.

The long-term solution is the alignment of an EOD battalion headquarters with subordinate EOD units in support of ARSOF. This relationship conceivably would begin with the early coordination between the two communities action officers during the working group and would progress as units begin a series of small unit exchanges and bilateral training events. Through regular training, Emergency Deployment Readiness Exercises and deployments, a better understanding of roles, capabilities, and expectations

will develop at the tactical level. Further doctrinal, material, and organizational modifications will arise and require refinement.

In addition to the alignment of a to-be-determined number of companies with ARSOF, the two existing 52d Ordnance Group (EOD) WMD Companies, that are currently tasked with CP support missions, should be included in the organization.

EOD units designated to support ARSOF, whether organic or through use of a DTA, must receive the requisite training, communications, night vision, weapons, and mobility platforms in order to operate in this unique environment. The EOD units must be capable of inserting with their ARSOF counterparts. At a minimum they must be capable of basic airborne operations.

Regarding the secondary question: What changes if any are required for ARSOF to better integrate EOD elements? ARSOF must define the requirement for improved integration. Full participation in the EOD-ARSOF working group will ensure that the EOD units are completely prepared to integrate with ARSOF operations. In order for this concept to have credibility, it must have the support of ARSOF leadership, and it must be articulated up the chain of command to USSOCOM. It is not enough for good ideas and intentions of EOD and ARSOF tactical level leaders to be documented in a lengthy research paper.

Success or failure of these initiatives will be predicated on the early interaction between ARSOF and EOD actions officers and teams. ARSOF and EOD units are both small, cohesive, and tightly knit organizations that pride themselves on being self-reliant and capable. Early interaction between ARSOF and EOD will set the conditions for later exchanges and training. From these training and planning evolutions, the units will

review internal standard operating procedures and TTP in order to capitalize on the capabilities of their counterparts. All organizational change incurs dissenters at some point. The dissenters will likely overcome their doubts once the teams begin working together on a regular basis.

The long-term solution's details, whether it is authorization and resourcing of new ARSOF EOD units through the Total Army Analysis process, development of habitual support relationships through use of a DTA, or the formal apportionment of an EOD battalion to USASOC must be undertaken by the designated action officers of the two communities and guided by the basic precept of enhancing the Joint Force Commander's war fighting options.

Continued ad hoc task organizations assembled on the fly will create battlefield friction and place the mission and soldiers of both commands in unnecessarily tenuous positions.

GLOSSARY

Access Procedures. Those actions taken to locate exactly and gain access to unexploded explosive ordnance.

Area Denial Ordnance. Ordnance items designed to deny area access by being activated by some means upon approach of personnel or vehicles. Examples range from a hand-emplaced mine which functions when a soldier steps on it to artillery- or aircraft-delivered mines which function when a sensor is activated by one or more of the following means; magnetic, acoustic, trip wire, random time delay, and others.

Combatant Commander (DOD). A commander of one of the unified or specified combatant commands established by the President. Also called CDR. See also combatant command; specified combatant command; unified combatant command.

Explosive Ordnance Disposal (DOD, NATO). The detection, identification, on-site evaluation, rendering safe, recovery and final disposal of unexploded explosive ordnance. It may also include explosive ordnance that has become hazardous by damage or deterioration.

Explosive Ordnance Disposal Procedures (DOD, NATO). Those particular courses or modes of action taken by explosive ordnance disposal personnel for access to, diagnosis, rendering safe, recovery and final disposal of explosive ordnance or any hazardous material associated with an explosive ordnance disposal incident.

Disposal procedures. The final disposal of explosive ordnance which may include demolition or burning in place, removal to a disposal area, or other appropriate means.

Improvised Explosive Device (DOD). A device placed or fabricated in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals and designed to destroy, incapacitate, harass, or distract. It may incorporate military stores, but is normally devised from nonmilitary components.

Render Safe Procedure. The portion of the explosive ordnance disposal procedures involving the application of special explosive ordnance disposal methods and tools to provide for the interruption of functions or separation of essential components of unexploded explosive ordnance to prevent an unacceptable detonation.

Special Operations Forces (DOD). Those Active and Reserve Component forces of the Military Services designated by the Secretary of Defense and specifically organized, trained and equipped to conduct and support special operations.

Special Mission Unit (DOD). A generic term to represent a group of operations and support personnel from designated organizations that is task-organized to perform highly classified activities. Also called SMU.

Technical Intelligence (DOD). Intelligence derived from exploitation of foreign material, produced for strategic, operational and tactical level commanders. Technical intelligence begins when an individual service member finds something new on the battlefield and takes the proper steps to report it. The item is then exploited at succeedingly higher levels until a countermeasure is produced to neutralize the adversary's technological advantage. Also called TECHINT. See also exploitation; intelligence.

Unexploded Ordnance (DOD, NATO). Explosive ordnance which has been primed, fused, armed, or otherwise prepared for action and which has been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material and remains unexploded either by malfunction or design or for any other cause.

Weapon of Mass Destruction (DOD). In arms control usage, weapons capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. Can be nuclear, chemical, biological and radiological weapons, but excludes the means of transporting or propelling the weapon, where such means is a separable and divisible part of the weapon.

APPENDIX A

QUESTIONNAIRE

CGSC SG 02A   29 September 2003

MEMORANDUM FOR EOD and ARMY SOF SUBJECT MATTER EXPERTS

SUBJECT: Request for Information regarding EOD / SOF operations

1. The goal of this questionnaire is to collect input from the Explosive Ordnance Disposal and Army Special Operations Forces communities regarding ways to improve the existing support relationship. The EOD and SOF communities are both consistently high OPTEMPO environments where units often conduct deployments in rapid succession. This research paper will document your observations with the endstate being development of a series of recommendations for improving the existing system for both elements.

2. Data collected will be used in research supporting a Masters in Military Arts and Science (MMAS) program. Your input must be attributable in order for it to be considered. I need to have your complete personal data as well as contact information in order to document your input. Additionally, I may need to follow up with a personal interview via telephone or in person.

3. The paper will use the DTLOM-PF (Doctrine, Training, Leadership Development Organization, Material, Personnel, Facilities) model as means to structure the data that you provide.

4. The traditional technical skills of the EOD Team Leader (i.e. actions taken in relation to the UXO, Improvised Explosive Device (IED)) are not the primary focus of this paper. However, if a particular skill / capability was deemed essential to the success of the mission and the EOD element was not trained / equipped please include that information.

5. Your general thoughts and / or recommendation(s) are requested. If possible please include copies of written material (formal or informal) that may provide further details (After Action Reviews, Lessons Learned, etc).

6. If you have questions regarding this questionnaire or the final product please contact me at (913) 651-1343, AKO "michael.evans@us.army.mil" or SIPRNET "mike.evans@us.army.smil.mil"

PERSONAL DATA

Last Name _____ First Name_____
Current Position / Title_____ Rank _____

Unit _____
Unit Address _____
_____
_____

DSN Phone Number _____
Commercial _____

Email address _____
SIPR (if available)_____

QUESTIONS:

1. Provide examples of operations (OEF, OIF, or others) that your unit either worked in support of SOF or received EOD support. Include reference to doctrinal missions for each (Use additional pages if required)

2. What was the primary mission of the SOF unit? What was the primary mission of the supporting EOD unit?

3. Describe the system (as you understood it) in place for requesting / providing EOD to SOF forces? At what organizational level were priorities established regarding competing requests for EOD support?

4. Were the EOD Teams organized for optimal performance? What were the shortfalls and what recommendations can you make?

5. When EOD assets were allocated, was the size of the element adequate for the mission? At what level did the Mission Analysis take place? Who participated from the two organizations?

6. What was the command relationship between the operational EOD and SOF elements?

7. Where were the SOF and EOD higher HQs located? What was the distance between the operational units and their parent HQs?

8. What was the primary and alternate means of communication between the operational EOD and SOF elements? Was the communications equipment organic to both elements?

9. What was the primary and alternate means of communication between the operational SOF and EOD elements and their respective HQs?

10. Who provided logistics support to the units? What was the means of re-supply and how often did re-supply take place? What was the means of re-supply for EOD or SOF peculiar items?

11. What was the relationship between the two units prior to deployment? Was there pre-deployment training or integration?

12. Describe the operational environments that these operations took place in. What was the primary threat? Provide examples. What was the average length of time between receipt of a Warning Order and execution of the mission? Provide examples if possible.

13. Were the EOD elements lacking any skills / training that would have made them more efficient or capable in the conduct of operations? Be as specific as possible.

14. How did SOF / EOD insert into the area of operations? What was the primary means of mobility during initial operations? What was the primary means of mobility during subsequent operations?

15. What would make it easier to provide EOD support to SOF elements?

16. What would make it easier for SOF to request EOD support?

17. General thoughts on improving the current situation.

18. Recommendations for other sources of information on this subject with contact data if available.

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